STUDY OF SELF-CONCEPT, BODY IMAGE, ADJUSTMENT AND PERFORMANCE OF HOCKEY PLAYERS

ABSTRACT

OF

THE THESIS SUBMITTED FOR THE DEGREE OF PHILOSOPHY

IN

Physical Education

BY

JAOWAD ALI

DEPARTMENT OF PHYSICAL HEALTH AND SPORTS EDUCATION
ALIGARH MUSLIM UNIVERSITY
ALIGARH (INDIA)

1996

STUDY OF SELF-CONCEPT, BODY IMAGE, ADJUSTMENT AND PREFORMANCE OF HOCKEY PLAYERS

ABSTRACT

Sports performance is not merely confined to acquisition of certain skills and motor abilities rather it is widely believed that host of variables influence it. Much emphasis is laid on methods and procedures for determining abilities and maximising them through training.

Sports scientists have pointed out that athletes are affected not merely by their physical, technical and tactical abilities but also by their psychological make-up (singer and Kane, 1975; Wein, 1973; Tutko and tosi, 1976; Vallarand, 1983). Mahoney and others (1983) suggested that within the constraints of the ability, an athletes performance is significantly related to his or her psychological functioning. Thus performance is considered to be the product of total personality of an individual.

Overview of researches conducted during the last four decades indicate that certain personality aspects such as self-concept, body image and adjustment have not been extensively investigated with regard to the performance of hockey players. Rapidly changing scenario pertaining to the changes in rules, equipments and infrastructure have immensely influenced the performance of our hockey team at international level. Thus, it necessiates that we should take into consideration the influence of psychological variables and personality characteristics of hockey players in order to enhance their performance.

Much time and energy is spent on investigating the parameters of sports performance. It is considered as "Unity of execution and result of sports actions or a complex sequence of sports actions measured and evaluated according to agreed and socially determined norms" (Thiess and Schnabel, 1987). Sports performance of hockey players has not been studied properly in our country, probably, due to the complexities associated with its measurement. An attempt

has been made in this regard in our study.

In the present study self-concept, body image and adjustment have been included as independent variables whereas the performance of the subjects considered as the dependant variable.

Self-concept is the way in which the individual reacts to himself (Symonds, 1951). Self-concept has been defined as individual's percepition, attitude and feeling about himself (Guilford, 1966). Alderman (1974) has defined self-concept in terms of personality traits such as self-confidence, self-assurance, self-consistency, self-assertiveness, self esteem, self-regard, self-enhancement and self-respect.

Many researchers have studied self-concept in a variety of sport settings and on athletes of various individual and team sports. Research findings in the field of sports indicate that there exists a relationship between positive self concept and high performance (Hamachek, 1978; Shaw, 1960; Campbell, 1966, Riley, 1983). Sharma, Shukla and Dwivedi (1990) obtained significant correlation between competitive performance and self-concept.

Traditionally, body image refers to the mental image we form of our own bodies. But critical evaluation of body image reflects that body image represents the manner in which a person has learned to organise and integrate his body experiences (Witkin, 1965; Fisher, 1968; Harre & Lamb, 1986). Accoridng to Dosamantes (1992) body image is individual's own attitudes as well as those of others towards his/her embodied self.

A few physical health scientists and sports psychologists have attempted to investigate the effect of body-image on athlete's performance (Davis, 1992; Dinucci and Others, 1994; Belogun and others, 1992). Snyder and Kivlin (1975) suggested that athletes have more positive body image as compared to non-athletes.

Sloan (1963) reported that subjects having a positive body image scored higher on motor abilities as compared to those who had a negative attitudes towards their body. Thomas (1972) found that failure in sports activities caused

athletes to view their body as significantly less active.

Adjustment is the condition of harmony between the individual and his environment. It is believed to be a continuous process by which a person varies his behaviour to produce a more harmonious relationship between himself and his environment. Arkoff (1968) opines that adjustment is a person's interaction with environment. Adjustment is commonly defined in terms of freedom from tensions and confilicts and adapting one-self to the needs of other individuals. According to Bordin and others (1943) adjustment is a process by which a living organism maintains a balance between its needs and circumstances that influence the satisfaction of these needs.

Adjustment is an important component of sports performance. In team as well as individual games one has to adjust according to the exigency of situation and game plan of the team and opponents.

It could easily be inferred that adjustment and success, particularly in team games, go hand in hand. Mann (1988) and Sharma (1984) found that successful athletes are better adjusted as compared to unsuccessful and non-athletes.

It is also reported that superior athletes showed higher levels of personal and social adjustment than those of less skilled athletes (Biddulph, 1954).

The present study was conducted on a sample of 224 hockey players of 14 Universities of Uttar Pradesh. The characterstics of the sample were as follows :

Sample Characterstics

Variables	Range	Average
Age	19-25 Yrs.	22 Yrs.
Length of Training	5-8 Yrs.	6 Yrs.
Level of Participation	University-State	Zonal Intervarsity
Father's Income (Per month)	Rs. 2000-6000	Rs. 4000/-

The objective of the present impirical investigation was to find out the predictors of performance of hockey players.

A list of each team, on the basis of eligibility proforma submitted by them, was prepared. The players were approached through the Managers and Coaches of the participating teams for obtaining their responses on Self-concept Scale (Rastogi, 1979), Adjsutment Inventory for College Students (Sinha and Singh, 1980) and Body Image Q-Sort Statements (Singh, 1991). The performance of the players was gauged by a panel of three experts on the play ground during the matches using a ten points rating scale.

Product moment coefficient of correlation was calculated to determine the relationship between self-concept, body image and adjustment. Multiple regression analysis was then used for determing the predictors of high performance.

The major findings are listed below : –

1. Self-concept, body-image, adjustment and performance of hockey players were found to be significantly correlated.
2. Self-concept, body image and adjustment emerged as predictors of high performance. The subejcts having high self-concept, positive attitude towards their body and proper adjustment tended to excel, and perform significantly better.

The results have been discussed and interpreted in the light of the researches conducted in the field. It has been concluded that the players who have achieved high level of performance, scored higher on self-concept, body image and adjustment than the players with a low level performance. It was thus assumed that the high performing hockey players possess high self-concept, have positive attitude towards their body and are well adjusted. Thus it may be reiterated that high self-concept, positive body image and proper adjustment of hockey players are indispensable for good performance. Hence due

consideration should be given to the psychological make-up of athletes alongwith the motor abilities and techno-tactical skills during the selection and training process.

It has been suggested that to reinforce the findings the study may be extended to other Indian Universities on both male and female subjects. It is also suggested that the replicative and longitudinal studies should be undertaken in different disciplines of games and sports with reference to gender and age group differences.

* * *

STUDY OF SELF-CONCEPT, BODY IMAGE, ADJUSTMENT AND PERFORMANCE OF HOCKEY PLAYERS

THESIS

SUBMITTED FOR THE DEGREE OF

Doctor of Philosophy

IN

Physical Education

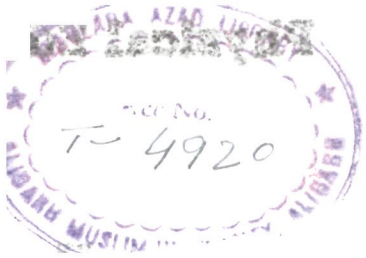
BY

JAOWAD ALI

DEPARTMENT OF PHYSICAL HEALTH & SPORTS EDUCATION
ALIGARH MUSLIM UNIVERSITY
ALIGARH (INDIA)

1996

T4920



Phone : 462 Internal

DEPARTMENT OF PHYSICAL HEALTH
& SPORTS EDUCATION

ALIGARH MUSLIM UNIVERSITY
ALIGARH—202 002 (India)

Dated...27.12.1996.....

CERTIFICATE

This is to certify that thesis entitled, **"Study of Self-concept, Body Image, Adjustment and Performance of Hockey Players"** embodies the research work carried out by Mr. Jaowad Ali, Lecturer, Department of Physical Health and Sports Education independently.

The contents of this thesis constitute original contribution made by Jaowad Ali and add substantially to the existing konwledge in the area of Physical Education and Sports Sciences. His work may be submitted for examination.

(Prof. I.H. Siddiqui)
Chairman

ACKNOWLEDGEMENTS

I am privileged to express my deep sense of gratitude to Prof. S. Sultan Akhtar, former Co-ordinator, Department of Physical Health & Sports Education, A.M.U. Aligarh and former President, Indian Society of Applied Psychology for his encouragement and invaluable help in completion of the thesis.

I would like to record my appreciation and gratefulness to Prof. Iqtedar Husain Siddiqui, Chairman, Department of Physical Health and Sports Education and Dean, Faculty of Social Sciences, A.M.U. Aligarh, for his inspiration to carryout the research. I would also like to thank Prof. Noor Mohammad, former Chairman of the Department and former Dean, Faculty of Social Sciences, for his keen interest in my endeavour.

Prof. Qamar Hasan, Chairman, Deptt. of Psychology, Prof. Najmul Haq, Department of Education and Dr. Akbar Husain Department of Psychology, A.M.U. Aligarh helped me in various ways and provided useful suggestions.

I am also indebted to many Professional colleagues and senior teachers of physical education such as Prof. A.K. Uppal, Dean, L.N.C.P.E., Gwalior, Dr. M.S. Sangral, Director of Physical Education, Punjabi Unviersity, Patiala, Dr. N.S. Mann and Dr. S.N. Sharma of Panjab University, Chandigarh who were kind enough to discuss the problem of the research and also made available to me relevant literature.

I feel impelled to record my sincere thanks to Mr. N.N. Gaur Mr. S. Yasin-uz-Zafar, Dr. Syeed-uz-Zafar and the Managers, Coaches and players of the Universities of Uttar Pradesh who helped me during the course of data collection.

Mr. Ashfaque Ahmad, Senior Computer Programmer, A.M.U. and Dr. Intekhabur Rehman deserve a very special vote of thanks for the pains they took in statistical analyses. I am indeed very grateful to them.

Thankfully I acknowledge the help rendered by Mr. Shafi Mohammad. Khan Ghauri, Department of Community Medicine, J.N. Medical College, A.M.U., Aligarh, who took great pains in typing the manuscript. I am also thankful to Mr. Ishrat Ullah Khan and Mohammad Ashraf Khan, M/s. Sigma Printographics, Allahabad, for typing the final manuscript and giving it presentable shape.

This work would have not been possible but for the generous help of my wife Mrs. Rashda Jawaid who ungrudgingly lent me free hand to do my work.

Jaw—Ali

Place : ALIGARH (JAOWAD ALI)

Date : 24th December, 1996.

CONTENTS

CHAPTER

O

N

E

INTRODUCTION

INTRODUCTION

Performance in every walk of life is cherished. This is also true that performance is related to pride and prestige of individual and groups as well as family, community and institution. Parents, for example, take pride in the academic performance of their children. Educational institutions make sincere efforts to maintain good results in examinations. If an individual attains high achievement, he is commended by the Community. Similarly evrey country expects players to give good performance in sporting events at the national and international levels. National pride is hurt if an athlete fails to perform well in an international competition.

Mordern games were started by the Greeks and since the Olympic movement, nations spent time and energy to prepare their teams to win laurels in different games and sports. In field hockey India made sensational debut in 1928 and won gold medal in the event. They continued to reign Supreme in the game till 1956. Though hockey had never been the game of masses but the nation always eagerly looks forward and expects hockey team to win the gold medal in Olympics. Later on when the World Cup in hockey was started in 1971, India was among the top contenders for winning it.

In recent years sports performance is not simply a matter of basic skills rather host of variables influence it. Research developments in the field of biological sciences such as Kinesiology, Biomechanics, Kineanthropometry, Physiology of exercise etc. have been borrowed and applied in games and sports to enhance performance of athletes. Scientific methods have been introduced for determining abilities and maximising them through training. Formerly psychological variables were not taken into consideration for enhancing performance. Improving morale of the team, imbibing motivation and interest, development of killer instincts, application of relaxation techniques and psychological peaking are presently emphasised for attaining high performance.

The significance of psychological factors for improving performance has been forcefully advocated by many experts (Singer and Kane, 1975; Wein, 1973; Brooke & Whiting 1975; Bull, 1995). They suggest that individuals are affected not merely by their physical, technical and tactical qualities but also by their psychological makeup. Mahoney (1983) reported that "within the constrants of his or her ability, an athlete's performance is significantly related to his or her psychological functioning."

Some other researchers have given importance to psychological factors in the field of physical education and sports (Tutko and Tosi, 1976; Vallerand, 1983). The significance of sports sciences was, first of all, identified by the scientists of former German Democratic Republic, and U.S.S.R. They made invaluable contribution for the development of sports performance (Bilodeau, 1966; 1969; Poultson, 1974; Singh, 1984). Sport performance is complex and multidimensional in nature. It is the process of tackling given sports tasks.

Thiess and Schnabel (1987) define sports performance as, "Unity of execution and result of sports actions or a complex sequence of sports actions measured and evaluated according to agreed and socially determined norms." The above mentioned processes, to a greater extent, determine the level of motor co- ordination and expression of movement structure. It is believed that motor co-ordination can not be directly assessed, but the movement structure through its various parameters can be assessed, recorded and quantified with the help of allied biological sciences.

A player is psychologically fit for the game if he possesses the required perceptions, emotional ability, motivation, intellegence and educability to accomplish the task. Tension and anxiety can become barriers to performance. Anxiety is one of the components of psychological factors which affect the performance of athletes (Walker, 1975; Cratty, 1973; Spielberger, Gorsuch and Lushane, 1970; Slevin, 1970; Nelson and Langer, 1963; Reed Jr., 1960; Hollingsworth, 1965; Novaczyk, 1977; Singer, 1980; Demoja, 1986).

Psychological factors affect the performance of an individual and of the whole team. Alderman (1974) while emphasising the psychological factors comments, "One essential point which must be stressed is that regardless of how much ability, skill and fitness level an athlete possesses for a particular sport task, the success or the quality of his performance will, in the final analysis probably depend on his particular psychological make- up".

In recent years sport psychologists have emphasised the significance of personality characterstics, attitudes, achievement motivation, self-concept, body image, adjustment and host of other psychological factors that influence performance of athletes (Singer, 1972; Porat & Associates, 1989; Mann, 1988; Mohan, 1982; Khan, 1986; Kane, 1968 and Ogilivie, 1968).

A critical evaluation of research studies conducted in our country give a clear evidence that very few researchers have attempted to study the influence of self-concept, body image and adjustment on performance of athletes. Thus it is pertinent to define the above mentioned psychological factors and examine their relevance to sports performance.

Self – Concept :

Self-concept has been a topic of interest of many disciplines such as theologians, philosophers, political scientists and novelists. James (1890) and Baldwin (1895) have analysed the self in terms of its constituent parts such as traits, characterstics, aspirations etc. Self-concept, according to Guilford (1966), is not an inherited quality rather it is formed as a result of an individual's experience and interaction with his environment.

Self-concept has been defined by different psychologists in different ways. Raimy (1943) defined self-concept as, "the more or less organised perceptual object resulting from present and past self observations", or "what a person believes about himself". Self-concept is the way in which the individual reacts to himself (Symonds, 1951). Self-concept consists of four important aspects: How a person perceives himself. What he thinks of himself. How he values himself. How

he attempts through various actions to enhance or defend himself.

Self-concept is also defined as individual's perception, attitude and feeling about himself (Guilford, 1966). According to Sharma (1967) it is a bye-product of learning experiences. It is observed that self-concept is self-awareness and has two different meanings. It is frequently used to refer to individual's attitude and feeling about himself and on the other hand as a group of psychological processes which govern behaviour and adjustment (Hall & Lindzey, 1970). According to Alderman (1974) self-concept may be defined in terms of personality traits such as self-confidence, self-assurance, self-assertiveness, self-esteem, self-regard, self-consistency, self-enhancement and self-respect. Self-concept is learned by an individual's interference from his unique experiences. For this, logical scheme has been suggested which involves three steps i.e. observation of behaviour, quality of an individual, and his personality. Self-concept is the means by which we create our image and identity (Chauhan, 1978). Therefore self-concept is the core dimension of ones personality. It determines the kind of adjustment the person will make. A change in the self-concept will bring changes in the entire personality. Changing one's self-concept requires tremendous insight. This means that a person must be able to see himself as he actually is, not as he would like to be or as others perceive him. Self-concept is an individual's way of looking at himself. It also signifies his way of thinking, feeling and behaving (Saraswat and Gaur, 1981).

Personal experiences and reactions of other persons together with feeling of success and failure are instrumental in many ways in developing self-concept. Kirchner (1978) opines that physical education activities enhance self-concept. Humanistic theorists such as Roger (1959) and Maslow (1971) have highlighted the significance of self. Roger's formulation of self have been extended into a theory of personality and into theoretical implications accounting for behaviour in a variety of situations. The development of self-concept is through interaction with others and the growing individual adopts for himself or internalizes this need to

be thought by others as worthwhile. It is natural that the growing person feels that there exists a chasm between what concept he has of him and his experiences in relation to both internal and external conditions. The lack of congruence gives rise to some kind of psychological maladjustment and the individual seems to be prone to anxiety, threat and disorganisation. The cleavage between self and experience, if exceeds to a particular limit, may inevitably lead to a breakdown of the defenses, hightened anxiety and a disintegration of the self structure. Thus, an individual finds himself overshadowed by emotions, becomes directionless and is rendered incapable of doing anything.

Maslow (1971) further contends that totality of attitudes, judgment and value of an individual relating to his behavioural abilities and qualities are called "Self-Concept".

Thus, we can conclude that self-concept is the key component of favourable life adjustment (Rosenberg, 1979).

Many experts pointout that the relationship between self-concept and sports performance has not been extensively investigated. A few researchers have studied such relationship in a variety of settings and for different games and sports (Holmen and parkhouse, 1981, Alderman, 1974, Sarbin, 1952, Johnson, Hutton & Johnson, 1954; Kroll, 1967; Brunner, 1969; Reid & Hay, 1979; Pestonjee, 1981; Schendel, 1965; and 1970).

Several studies have been conducted in the field of education which emphasize that there is relationship between positive self-concept and high achievement whereas there is relationship between negative self-concept and under achievement (Shaw & Others, 1960; Campbell, 1966; Coopersmith, 1967; Bachmann & Others, 1972; Gorden, 1961; and Brophy, 1967). In the field of sports education Darden (1972) noticed significant differences on self-concept among the team sports and individual sports but not between the combined team-sports and the combined individual sports. Only few researchers such as Bash (1972) and Richard (1979) found no relationship between self-concept and sports performance.

Riley (1983) obtained significant positive relationship between self-concept and performance. Different studies have been conducted to findout the relationship between self-concept and performance. The results reveal that there is positive relationship between these two variables (Bunnel, 1978; Morris & Others, 1981; Robert, 1971; Pate, 1973). Competitive performance and self-concept also yeilded similar results (Sharma, Shukla and Dwivedi, 1990).

Thus, we can conclude that self-concept is important both from the education and sports performance point of view. It is pointed out that strong self-concept provides an individual more confidence, assurance and assertiveness in his actions with others and in the endeavours he undertakes.

Further attempts have been made to explore the relationship between body image and performance as well as adjustment and performance.

Body Image :

Like self-concept, body image has resisted the operational clarity needed to significantly advance our knowledge of the term. It is the term with no clear literary meaning or operational definition (Wylie, 1984). Researchers have given a wide variety of definitions of body image and due to lack of a precise operational definition the concept has variously been referred to as 'body schemata', 'postural model', 'body ego', 'body percept', 'body awareness', etc. (Zion, 1965; Gellerts & others, 1971; Kolb, 1959). All these terms are interrelated and depict as to how the individual perceives his own body. It does not imply that the individual's concept of his body is represented by a conscious image, rather it embraces his collective attitudes, feelings, and fantasies about his body without regard to his level of awareness. The concept of body image is extremely complex. It includes surface, depth and postural pictures of the body as well as the attitudes, emotions and personality reactions of individuals to their bodies (Kolb, 1959).

For the first time interest in the body image appeared in the work of

neurologists who observed that brain damage could produce bizarre alterations in a person's perceptions of his body. Patients suffering from brain damage manifested such extreme symptoms as the inability to recognise parts of their own bodies and the assignment of entirely different identities to the right and left sides of their bodies. Interest in body image phenomena was further reinforced by observations that neurotic and schizophrenic patients frequnetly had unusual body feelings (Schilder, 1935). Neurologists, psychiatrics and early influential theorists reported the following kinds of distortion in the schizophrenic patients : a sense of alienation from his own body (depersonalisation), inability to distinguish the boundaries of his body, and feelings of transformation in the sex of his body. Other early influential theorists took the view that a body scheme was essential to the functioning of the individual (Mead and others, 1920). Fisher (1958-a) has explained that Freud considered the body concept basic to the development of identity and ego structure. When the child is able to perceive his own body as something different from its environment, he presumably acquires a basis for distinguishing self from non-self.

The theory of libidinal development advocates localization of energy and sensitivity at oral, anal and genital body sites. Presumably when a person failed to mature and was fixated at one of the earlier erogenous Zones (Oral or Anal), it was left to deal with adult experiences in terms of a body context more appropriate to the way of life of a child (Freud, 1959). Psychoanalytic theorists continue to focus upon body attitudes as significant in understanding many forms of behaviour deviance (e.g. Schizophrenia and Fetiscism). Psychoanalytical concepts have had a major influence upon body image theory and research.

If we closely examine the definitions and view points of body image, two distinct aspects emerge. Lerner (1976) emphasize more, the immediate and temporary aspects of the body image which according to him is in constant flux and reformation. Fisher and Cleveland (1958) on the other hand emphasize the relatively stable and unchanging aspects of body image. Interestingly the two

aspects of body image, according to Puretz (1982) are not in conflict with one another. Body image represents the manner in which a person has learned to organise and integrate his body experiences (Witkin, 1965; Fisher, 1958-b; Whiting, 1973; Corey, 1984; Thomas, 1985; Harre and Lamb, 1986). Dosamantes (1992) while discussing body image, describes that cultural definition of the idealised body image is subject to change under pressure from social, economic, political and religious sources. Body image reflects the individual's own attitudes as well as those of others towards his/her embodied self.

Researchers and theorists have speculated about the factors which influence the individuals on body image right from birth. It is pointed out that body image is the individual's awareness and knowledge of the physical and spatial characteristics of his or her own body including idea of knowing body parts and their relationships with each other (Galloway and Bean, 1974; Whiting, 1973; Witkin, 1962). Child's conception of his body develops and becomes differentiated as he grows up through an interplay of the forces that shape his personality. It is also suggested that achievement of a differentiated body concept is a manifestation of the child's general progress towards greater psychological complexity. Kane (1972) proposes that "at an early age, the child experiences himself and his body as a 'continuous body field matrics'. As he grows and develops, the differences between his body and the non-self world are formed and later he becomes aware of the differentiation between parts of the body and their interrelatedness, so that his body concept and perception becomes less global and more articulated in terms of the body parts and body boundries" (Witkin, 1965).

A few researchers have tried to ascertain the process of development of body image. It is found that progress towards greater differentiation begins with the learned ability to discriminate between the left and right sides of the body–a progression which is facilitated by the bilaterally symmetrical placement of the limbs, the sense receptors and nerve pathways. Such physical structures

provides relatively independent sources of sensory impressions which can be utilized by the child in learning to distinguish between the two sides of the body. Such discrimination is enhanced as the child establishes a preference to use a particular hand or foot (Kephart, 1960). Developmental psychologists have tried to ascertain the age at which body image gets fully established. On the basis of research findings Witkin & others (1962) suggested that the development of a differentation between self and field is a gradual process. The development of self is rooted in but not limited to sensations generated by body functions and allied activities. It is rather more derived from all the experiences which a child encounters during development in relation to his own body and the body of others. According to Barrow and McGee (1979), development of an acceptable body image with its accompanying movement image is the part of the total process of developing self image which in turn is related to identification and internalisation.

It has been noticed that many people lack a clear image of their bodies and do not take very good care of themselves. An individual is more familiar to one's body than others. We acquire a great deal of information abuot our bodies. Our bodies are constantly changing, and time lags in bringing our body images upto date. Our awareness of insides of our bodies is quite meagre (Atwater, 1995).

Traditionally, body image refers to the mental image we form of our own bodies. Recently, however, the term body image has been expanded to include how an individual feels about his body as well as how satisfied or dissatisfied he is about his body. Since our society puts so much emphasis on physical appearance, we expect many people to be satisfeid with their bodies. Cash, Winstead and Janda (1986) did a detailed analysis of 2000 adults of United States to determine the changes in their body images. They argued that we may be healthier and fitter than ever but we are less satisfied with how we look. Women were still less satisfied than men with their body image. The most likely

reason for such a difference was attributed to greater emphasis on physical appearance for women than men. Physical disfigurement or disability often had a negative impact on body image, fitness and health (Cash, Winsted, and Janda, 1986).

Weight is a major factor in body image. Investigators reported that 55 percent of women and 41 percent of the men were dissatisfied with their body weight. Men were most dissatisfied with the mid-torso region, women were most dissatisfied with the mid and lower torso, including hips and thighs, the areas most affected by increased weight.

Such findings suggest that women have internalized a more stringent standard of slimness with regard to attractiveness, thereby making themselves more susceptible to dissatisfaction with their looks (Cash, Winstead, and Janda, 1986; Atwater, 1995).

The satisfaction with our bodies is greatly influenced by our image of iedal body–an integral part of our overall body image. Our body ideal, in turn, is greatly influenced by the particular body ideals prevalent in our culture. Every society has somewhat different standars of beauty, but the electronic media has instilled in us greater awareness about slimness and fitness.

The ideal man is tall, large, muscular, and energetic. The ideal woman is slim, shapely, smooth-skinned, young and glamorous. The ideal varies in each era, so that the muscular type male may be more desirable in one period than another. The closer to the ideal body we are, the less pressure we feel to change. But the overweight, physically disabled, and the old may feel more pressure to change or hide the disliked parts of their bodies. Individuals who don't fit the images tend to have negative feelings about themselves and thus, making it difficult for them to accept themselves as they are (Friedman, 1991; Atwater, 1995).

Research studies suggest that when compared to men, higher proportion

of women remain dissatisfied with their bodies. A major factor is our weight-obessed culture, which bombards us with countless messages that fat is bad, which in turn encourages women to hold themselves to a stricter standard to thinness than men.

Researchers have tried to explore whether people who feel good about their bodies also feel happier about themselves. As expected, they found a positive relationship between body image and psychological well being. People who like their appearance, fitness, health, and sexual attractiveness also tend to feel happier and well adjusted. But there was a marked difference in psychological adjustment among those who dislike their bodies (Fallon, 1990; Friedman, 1991; Cash & others, 1986).

Each individual needs to construct a personal body ideal that is not too different from those in our culture but is revised to accomodate our own particular shape and features. This need becomes especially important with increasing age, so that our body ideal will allow us to see ourselves as reasonably attractive persons at each stage of life.

Surveys have shown that individuals of both sexes hold body ideals that are somewhat different from their actual bodies. Thus the average man wants to be an inch or so taller than he is and have broader shoulders and a more muscular build. The average woman wants to be an inch or so taller and somewhat thinner than she is.

Fallon & Rozen (1985) concluded that men are more apt to realistically judge their weight, their ideal weight, and the body shape. Bennett, Goldfinger & Johnson (1987) concluded that psychological well-being appears to be more closely tied to people's emphasis on fitness and health than to their appearance. In the body image survey, people's sense of well being was found unrelated to the importance of appearance for them. But people who cared about their fitness and health were generally happier with their lives than those who were less concerned with such matters. The investigators were especially impressed by the

findings that people who cared about fitness and health had more positive feelings about their appearance than those who were more concerned with their appearance. It can be argued that our concern for fitness and health may be more closely tied to a satisfying body image.

Researchers have investigated the role of psychological variables in sports performance and it has been realized that psycho-social and physiological characterstics influence athlete's performance (Khan, 1986; Kane, 1972; Claridge, 1967; Costill and other, 1973; Clarke, Wrenn and Vaccaro, 1979; Hagerman and others, 1979, Parr & others, 1978; Sinning and others, 1977; Pollock and others, 1977). But unfortunately very few researchers have strived to explore the relationship of body image with sports performance. Researches on body image have been discussed and elaborated in terms of clinical aspects. Some physical health scientists and sports psychologists have ventured to investigate the effect of body image on athlete's performance (Dinucci and others, 1994; Davis, 1992; Balogun and others, 1992; McDonald and Thompson, 1992; Gustavason and others, 1993). But meticulously planned researches on body image and sports performance are very few. The relationship between body image and performance of hockey players, to the best of our knowledge, hase not been investigated in our country. The present research may fill the void and could be utilised by hockey coaches in improving our performance in the game.

Adjustment :

The review of literature on adjustment clearly indicates that the term 'adjustment' has been defined in various ways. Psychologists, biologists, educationist, sociologists and other behavioural scientists have described the term in their own ways. The dictionary meaning of 'adjustment' is to fit, to make correspondence, to adopt or to accomodate. Adjustment means a person's interaction with his environment. Environment includes everything external to the person to which he is exposed. The behaviour of an individual in a situation depends upon his personal characteristics as well as the situation. Adjustment is

dynamic rather than static in quality. A person changes with the change in his environment. It is believed to be a continuous process by which a person varies his behaviour to produce a more harmonious relationship between himself and his environment. The direction of his efforts may be towards modifying his own behaviour and attitude or towards changing the environment or both. In other sense adjustment is a state i.e. the condition of harmony arrived at by a person whom we call "well adjusted". Adjusted person is relatively efficient and happy.

'Adjustment' came into popular use in psychology during the 1930's and was given strong endorsement by Shaffer (1956). He emphasised the biological adaptation of the organism to its environment. This is a somewhat mechanistic approach to human behaviour on the lines of behaviorists (Watson and Dashiel, 1930). The term adjustment as used by Shaffer (1956) was subjected to considerable criticism particularly with reference to its emphasis upon the mechanical adaptation of human being to the demands of the environment. It was argued that man not only adapts to his environment, but through the use of his intellegence and imagination changes his environment to meet his needs more effectively (Freud, 1933; Adler, 1930; Horney, 1937; Erikson, 1963; Fromm, 1941; Bandura, 1971; Mischel, 1968; Rotter, 1954; Maslow, 1968; Allport, 1937; Frankle, 1969.

Arkoff (1968) opines that adjustment is a person's interaction with environment. Each person constantly strives to meet his needs, and reaches his goals. At the same time he is under pressure from the environment to behave in a certain way. Adjustment involves the interaction of personal and environmental demands. It is emphasised that adjustment is a process by which the individual tries his best to maintain a harmonious, stable and satisfying relationship with his environment, (Hussain, 1985). In fact adjustment has been regarded as a process rather than an achievement or a condition (Symonds, 1946; Madigan, 1962; Coleman, 1960; Schneider, 1965; Kaplan, 1965; Glanz and Welston 1958; Lazarus, 1961; Smith, 1961; Gordan, 1963).

Psychologically, adjustment implies a constant interaction between the person and his environment, each making demands on the other. Sometime adjustment is accomplished when the person yields, at other time it is achieved when environment yields to person's constructive activities. In most cases adjustment is a compromise between these two extremes and maladjustment is a failure to achieve a satisfactory compromise (White, 1956).

Adustment is commonly defined in terms of freedom from tensions and conflicts and adapting oneself to the needs of other individuals. According to Bordin (1943) adjustment is a process by which a living organism maintains a balance between its needs and circumstances that influence the satisfaction of these needs. Adjustment is therefore, state of harmony between the needs, activities, resources of a person and the conditions of the milieu.

The factors that determine one's adjustment are numerous and complex, and routed in the personality development (Scarr and Kidd, 1983; Slater and Cowie, 1971; Sullivan, 1947; Sinha and Singh, 1980).

In the light of the above discussions it may be deduced that every living being is required to adjust himself to lead a satisfactory and happy life. Throughout his life span human beings are exposed to problems which must be solved otherwise a person is afflicted by mental stress, anxiety and such other agonies. During his childhood a child is required to embibe language, morality, values, manners and etiquates. During adolescence he is required to adjust to the rapid and radical bilogical changes. This is a time when he also faces the problems of choice of courses and career. During adulthood he has to select a job and make a proper adjustment to be successful in life. This is the period when he has to start his material life. In brief adjustment is crucial for various walks of life. Thus it is quite obvious that adjustment is also very significant for sports pereformance. Because he has to learn skills, maintain the learned skills and maximise the acquired skills during sporting events. In team as well as individual games he has to assess his apponent and modify his techniques and

strategies. In team games specially one has to adjust himself with his team mates also, otherwise, he cannot excell in his performance.

The relationship between adjustment and sports performance has not been extensively as well as intensively investigated to desired extent. Though psychologists have highlighted the importance of adjustment to various psychological and social factors (Palsane, 1970, 1977; Boykin, 1957; Landau, 1957; John and others, 1959; Deutsch, 1960; Brar, 1973; Ghorpade, 1978; Rangari, 1984; Saraswat and others, 1984; Rao, 1972; Sharma and othrs, 1974; Bhatt, 1961; Resnick, 1951; Chadha and Chandra, 1985).

It can, thus, easily be inferred that adjustment and success, particularly in team sport, go hand-in-hand. Social and emotional adjustments are considered to be the constant sources of inspiration to a player to adjust himself to the changing conditions that competitions present and to regulate his emotions to contribute to team's success. A well adjusted individual can meet his needs with the resources available at his command to contribute to team's success. Also, a well adjusted individual can meet his needs with the resources available in his environment. Mann (1988) and Sharma (1984) have found successful athletes to be better adjusted as compered to unsuccessful and non-sports persons. Studies reveal that well adjusted athletes can do best and maintain their emotional stability and health as compared to their unsuccessful and non-athlete counterparts (Scymonn, 1956; Boscow 1972; Cooper, 1969; Kane, 1968; Ogilivie, 1968; Buck, 1971; Sharma, 1984; Maxiener, 1983; Morgan and Johnson, 1978).

It is reported that superior athletes showed higher levels of personal and social adjustment than those of less skilled athletes (Biddulph, 1954). There is hardly any empirical evidence of a negative correlation between adjustment and sports performance. Games and Sports constitute an ideal setting for the development of desireable personality charcteristics such as confidence, sociability, cooperation, leadership and personal adjustment (Loye, 1968). It may be mentioned that games and sports are organised in educational institutions

and social settings to facilitate and regulate human actions and also to provide an opportunity to the audience for catharsis of their emotions. It is unfortunate but true that not a single study has been conducted to determine the influence of adjustment on the performance of hockey players. The present investigation may bridge such gap.

Since the present investigation deals with the performance of hockey players, it was considered necessary to present a brief history of the game.

Persia (Iran) is known to be the birth place of hockey. The Greeks borrowed the idea of the game from Persians, and, in turn passed it on to the Romans. It then travelled to France and eventually it found its way to Britain (Miroy, 1986; Singh, 1972; Lodhi, 1984).

The Federation International De Hockey (F.I.H.) was founded on January 7, 1924. Hockey was first introduced in the Olympic Games at London in 1908, and in the 3rd Asian Games in 1958 held at Tokyo. The first–ever Hockey World Cup was organised in Barcelona (Spain) in October, 1971. The game has acquired global recognition and is being enthusiastically played in more than hundred countries of the world (Singh, 1972; Hendricks, 1988).

Hockey was brought to India by the Englishmen towards the end of 19th Century. Considering the popularity of the game, the Indian Hockey Federation (I.H.F.) came into existence on 7th, November, 1925 at Gwalior. The first National Hockey Championship was held in 1928 at Calcutta where the then United Provinces emerged winners and Rajputana as Runners-UP. So much did the game appeal to the people of India that it become its national game (Sahay, 1968; Masood, 1936; Official Hockey Souvenir, 1994).

The performance of India in Olypic Hockey is perhaps the most glorious chapter in the annals of Indian Sports. The country's domination in olympic hockey continued without a break, from its debut in 1928 at Amsterdam in 1956 at Melbourne. In 1960 at Rome, India secured Runners-Up position and in 1964

at Tokyo, recovered once again to become champions. Thus, beginning with the victory in its first appearance in 1928, India created a maiden record of six wins in Olympic Hockey, one that is unlikely to be equalled by an country in the near foreseeble future (Hendricks, 1988; Singh, 1972; McWhirter, 1984; DeMellow, 1980; Babu, 1981).

Statement of the Problem :

In the light of the above discussion it can be said with a degree of confidence that the influence of slef-concept on performance of players in various games has been investigated. Similarly the influence of body image and adjustment has also been explored quite reasonably well. But the influence of these variables either individually or collectively has not been investigated regarding the performance of hockey players. As such the investigator humbly took upon himself to study the influence of self-concept, body image and adjustment on the performance of hockey players.

Objectives of the study :

Almost every country of the world is concerned about the performance of its athletes in the various fields of sports. Those countries who achieve some significant results in a game show greater enthusiasm in maintaining their level of achievement. Thus, our country should not be an exception in this regard. More so, because we from 1928 to 1956 were the reigning champions of the field Hockey. Even today we are a power in the game to be reckoned with. The factors responsible for our decline have been many but the most outstanding one may be the lack of concerted efforts of the sport scientists. In recent years they have tried to devote their energies towards the enhancement of the performance of our hockey players. But still much remains to be done. In this regard the present study is a humble effort.

Review of literature has led us to believe that many psychological variables play a significant role in achieving desired performance in various tournaments.

First of all it is often difficult to define the criteria of performance. An attempt has been made to propose an operational definition of performance. On the basis of review we gathered that self-concept, body image and adjustment being important aspects of personality, influence performance.

It has also emerged that researchers have tried to investigate the influence of these aspects of personality on performance individually. To the best of our knowledge no attempt has been made to collectively study the influence of self-concept, body image and adjustment on performance. Another important feature of the present investigation is to study the interrelationship between self-concept, body image, adjustment and performance. Apart from the above mentioned aspects, we have also attempted to partialout the relationship between self-concept, body image, adjustment and performance.

Hypotheses :

Keeping in view the objectives of the present investigation the following hypotheses were formulated: –

1. Self-concept, body image and adjustment would influence performance of hockey players.
2. High and low performers would differ on self-concept.
3. High and low performers would differ on body image.
4. High and low performers would differ on adjustment.
5. High and low performers would differ on different dimensions of self-concept.
6. High and low performers would differ on different dimensions of adjustment.

Significance of the Study :

The findings of the present study are expected to have theoretical as well as practical implications. Physical education at present is considered to be

inter-disciplinary. Sports scientists, coaches and sports administrators have to interact with each other and work as a team for the development of games and sports. If we are really interested in the development of games and sports we have to develop positive attutides towards the above mentioned aspects and fully cooperate with each other. The research findings such as the present one should be tested, verified, and implimented by the Coaches and sports psychologists in their training and competition plans. Further, the findings may also stimulate others to undertake researches on performance of other sporting events suited to our own socio-cultural milieu.

* * *

CHAPTER

T

W

O

REVIEW OF LITERATURE

REVIEW OF LITERATURE

Traditionally, we review the studies related to the topic of the research. The review of the literature gives us a clear understanding of the terms used, the methodological issues involved and the developments in historical prospectives. It also brings to light the unexplored aspects and in a way it helps in providing guidelines for carrying out the research. It is evident from the title of the research that it is extended to investigate self-concept, body-image, adjustment and performance of hockey players. We would also like to critically review the relations between self-concept, body image, adjustment and performance of hockey players.

Self-Concept and Performance :

Self-concept provides an athlete more confidence, assurance and assertiveness in his actions with others and in the task he performs. Feeling of personal worth is usually associated with high self-concept (Kroll, 1967; Brunner, 1969; Reid and Hay 1979; Schendel, 1970). Pate (1973) found that wrestlers who demonstrate a high level of winning performance seems to have a significantly higher positive self-concept.

Singh and Debnath (1986) studied the relationship of competitive performance and self-concept of Indian Gymnasts. The results indicated that the higher performance group scored higher on self-concept as compared to the poor performance group. They claim that the better performance of the group could be attributed to its better self-concept. Sharma, Shukla and Dwivedi (1990) also obtained positive correlation between competetive performance and self-concept. The generalization made by the investigators can not be held valid at the moment as they failed to control other variables. Rani, Rao and Krishna (1992) studied the effect of Yogic-exercises on self-deal disparity on 70 subjects ranging between 17-39 Years of age. The test was conducted on a SID scale before and after completing a Yoga training schedule on two groups consisting

of 35 students in each group. The significant correlation between self and ideal self revealed congruence in personality. The post training group demonstrated more congruence than the pretraining group.

Martin, Kuiper, Olinger and Dance (1993) examined the relationship between humor, self-concept, coping with stress and positive effect. Result showed greater levels of humor was associated with (i) a more positive self-concept with respect to actual-ideal discrepancies, self-esteem and standards for self- worth evaluation; (ii) more positive and self-protective appraisals with regard to stress, and (iii) significantly greater positive and negative life events. Findings supported that humor may enhance the enjoyment of positive life experience.

Mathew and ranganathan (1987) compared volleyball and football players on various dimensions of self-concept. It was found that the spikers had significantly higher self-concept towards their physique and health. Overall behaviour and habits showed similarity for volleyball and football players, and both the groups tended to have similar emotional tendencies but the volleyball players showed significantly higher self-concept with regard to mental health.

Darden (1972) compared the self-concepts of athletes belonging to individual sports, team-sports and team-individual sports. In multiple discriminant analysis, the researcher found significant difference in self-concept among the individual sports and team- sports whereas no difference was observed in the self-concept between the combined individual sports and combined team-sports.

Key (1972) investigated the relationship between self-concept, playing ability, personal and parental interest in sports. The sample was drawn from seventh, eighth and ninth grade male students. Results indicated a significant positive relationship between reported interest in sports and self-concept of the subjects at each grade level. But a minimised relationship between measures of physical ability and self-concept were repoted from 7th to 9th Grade. It was also found that among the students of 7th and 9th grade their parent's interest in

games and sports was positively related with their self concept. Chaudhari and Ray (1992) have reported significant positive relationship between intellegence and self-concept. The intellectually superior subjects scored higher on self-concept.

The above mentioned research is probably the only reported study of its kind. By implication it could be inferred that a certain optimal level of intellegence is required for performing well in sporting events.

The relationship between self-concept and physical fitness one of the most important elements of sport performance was explored by numerous research scientists (Tutko and richards 1979; Wooden, 1980). Jackson (1980) reported a signifcant relationship between total physical fitness and total self-concept scores for both the college male and female groups. Cone (1979) however found a negligible relationship between physical fitness and self- concept. Similarly, Gill (1981) concluded that the levels of high and low self-esteem did not influence the level of physical fitness of the athletes.

Several researches have indicated a high degree of realtionship between a person and his achievement, such as school climate and sports achievement (Holeman and Parkhous, 1981).

French (1977) found significant positive relationship between self-concept and athletic ability of school children. Anderson (1979) found that the subejcts getting high grades in Boxing obtained significantly positive high self-concept scores. Similarly Riley (1983) reported significant positive correlation between physical performance and self-concept.

Marsh (1993) studied the relationship of Physical fitness, self- concept and academic achievements for a large national representative sample of more than 6000 Australian boys and girls. Correlations between self-concept and corresponding external criteria increased steadily with age in both the physical and academic domains. Findings suggest that fitness and self-concept were strongly related to some individual measures such as 1.6 km. run, 50 mt. dash,

push-ups, skin fold thickness, long-jump and body girth scores and some components of physical fitness such as cardiovascular endurance, power, dynamic strength and body composition than others. The finding of the above mentioned study indicates that self-concept and athletic performance are related with each other. Gill and Rao (1992) investigated the relationship between self-concept and physical fitness among 169 secondary school boys aged between 13-18 years. The Physical fitness of each subject was gauged by AAHPER Youth Fitness Test (1973). Self-concept was measured by administering the written test of self concept in Hindi standardized by Sharry, Verma and Goswami. Data was analysed statistically by computing correlation co-efficient and applying the test of "least significance difference". Results showed no significant correlation between scores on physical fitness and self-concept except a low correlation between the scores of health and physical dimensions of self-concept with composite physical fitness scores. The group having very good self-concept was found to be much superior in physical fitness as compared to the group having lower degree of self-concept. The low correlation might have been obtained due to sample characteristics.

Olszewska (1982) studied the relationship of self-image and self-estimation with the performance of team players. 260 volleyball, soccer and handball players were investigated by employing the Giessen Test, the A.S. Reaction study Test and the practical assessment of performance effectiveness. Result of the study indicated that players who achieved a high level of performance effectiveness had a high self-image.

Guyot, Fairchild and Hill (1981) assessed the relationship of sports participation, body build and self-concept in 50 boys and 58 girls scoring below the 59th percentile, and 87 boy and 88 girls scoring above the 70th percentile on a physical fitness- motor ability test. The subjects were in grade 4-6. Both boys and girls in high physical fitness group scored significantly higher on self-concept than boys and girls in low phyisical fitness group. Sports participation corrolated higher with the selfconcept and physical fitness of the girls. Finally, body build

corralated with the self-concept of the girls, but not with the self-concept of the boys.

Raj (1991) compared the motor fitness, self-concept and adjustment and the effects of self-concept and adjustment problems on motor fitness among Indian and Anglo-Indian boys of St. Mary School, Madras. The data was collacted from 200 school boys (N-100 Indians and N-100 Anglo-Indians) ranging in age from 13 to 17 years. The findings revealed that Anglo-Indian boys scored higher on motor fitness and self-concept in comparison to other group. Self-concept had positive influence on motor fitness for both the groups while adjustment problems negatively influence the motor fitness of both the groups.

Kumari (1988) investigted the self-concept of sports and non- sports shools girls of Himachal Pradesh. The total sample drawn was 600 (300 sports and 300 non-sports girls). Saraswat's (1984) Self-concept Scale was administered. The finding indicated that sports girls from rural as well as urban areas scored comperatively higher on physical self-concept, social self- concept and temperamental self-concept as compared to non-sports girls.

Researches in the field of Psychological differences among athletes and non-athletes were undertaken by various investigators (Schendal, 1970; Snyder and Streiteer, 1975). Schendel (1965) compared the personal and social characteristics of ninth and twelfth grade atheletes and non-athletes and found more positive personal and social characteristics in athletes as compared to non-athletes. Koening (1969) reported that high school Basketball girls possessed a higher positive self-concept than the non-participants. In another study it was found that the College athletes had higher positive self-concept than the non–athletes (Schendel, 1970).

The research studies reviewed so far indicate that self-concept influences performance of players of various games and sports. But inspite of our efforts no research study of hockey players' self-concept and performance was found.

Gender differences in self-concept of players of various games have also been reported (Finkenberg and Teper, 1991; Stein and Molta, 1992). Igbokive (1990) studied personality changes associated with aerobic fitness assessed in three categories of 63 Nigerian school girls ranging between 15-16 years of age. The subjects undertook a jogging programme three times a week for 10 weeks. A self-image questionnaire was administered. The data was analysed using 't' test scores as covariates. The results showed that only joggers experienced significant changes in self-concept.

Gupta (1991) studied gender stereotypes and self-concept among 70 men and 70 women college students in India. A 7-points scale having 4 factors e.g. (1) Evaluation (good-bad), (2) Potency (strong-weak), (3) activity (Active-passive), and (4) Understandibility (predictable-unpredicatble) was used. The findings indicate that both men and women had similar self- concept with regard to intellegence, happiness, strength and rationality.

Porat, Lufi and Tenenbaum (1989) studied the role of self- concept, locus of control and anxiety on 20 competitive gymnastic girls aged 7 to 9 years. During one year longitudinal study the subjects were administered the Tennessee self-concept scale, a locus of control scale for children, and the state-trait anxiety scale. Following a year of training subjects participated in Gymnastics competetion. Ten psychological measures accounted for the performance variance. Personal self-concept was reported to be the best predictor of succesful performance in competition followed by locus of control, identity self-concept and trait anxiety.

Roy & Anuradha (1995) assessed the self-perception profile of Gymnastic children belonging to the family of circus artists. The test were conducted at SAI centre, Tellicherry. Results showed a higher score on behavioural conduct, global self-worth and scholastic competence among gymnasts. Female gymnasts were found to significantly differ from males in physical appearance and behavioural conduct.

Rescarches indicating no relationship between self-concept and sports participation have also been reported. In such an study Bash (1972), administered Tennessee self-concept scale on Baseball players. The subjects were also rated by coaches to assess their individual Baseball performance. The results showed no significant relationship between the self-concept of an individual and his subjective rating of baseball performance. In another study Cone (1979) reported that physical fitness, athletic performances and physical characteristics appear to have been minimally related to self-concept. Jeyakumar and Rajamanickam (1987) assessed the self-concept of 255 sports school boys of Madras, Coimbatore and Annamalainagar. Self- concept scale by Rastogi (1979) was used. Results revealed that boys in higher age group showed poor self-concept. The length of stay at sports school did not have any influence upon their self- concept. There were no remarkable differnece between the self-concept of track and field and team athletes.

The review of studies under this section have overwhelmingly reported that self-concept positively influences sports performance. But, there are strong reports that self-concept is not related with performance. Wherever no significant reltionship has been reported it was due to inadequacy of sample size or due to age variable such as school students. Thus, we are inclined to infer that by and large in every discpline of games and sports self-concept influences performance.

Body Image and Performance :

Several sports scientists have focussed their attention to study the measurement of body image (Fisher and Cleveland, 1958; Sugarman and Haronian 1964; Sullivan, 1965; Sakers, 1968; Vincent and Dorsey, 1968). But no researcher has made any effort to investigate the relationship between the perceptions of self- concept, body-image, adjustment and level of performance. Investigators who have interest in exploring body image have analysed the mode in which the people perceive their bodies.

Fisher (1958) a, 1958 b, 1961, 1965) has reported that some people focus on their body more on the right than the left side, some on the back rather than the front and some on the upper half than the lower extremity. A good number of investigations have been conducted to find out the effect of body type and other physical characterstics on the performance of athletes. The significance of morphological factors on the performance of athletes has been well established. The body type influences the biomechanical movements of athletes. Hence it has been proved that certain physical characterstics on account of their facilitative effect on motor actions are of immense value for certain specific sports.

Researchers have revealed that positive traits were attributed to mesomorphs, comparatively less positive to ectomorphs, and endomorphs received a negative rating (Brodsky, 1954 and McCandless, 1960).

Jourard and Secord (1954); Zion (1965); Rosen and Ross (1968) have suggested that one's appearance seems to be an important determinant of self-esteem, both among male & female.

Theron, Nel and Lubbe (1991) assessed the relationship between body image and self-consciousness together with the sex differneces on measures of these two concepts. 56 male and 211 female undergraduate Afrikans were administered a self-concept and self-consciousness scale. The results showed a negative correlation between body image and self-concept and public and private self consciousness correlated positively with each other. The extent of negative and positive correlations have not been mentioned.

The relationship between self-concept and body concept-an important part of the total self-concept of the individual have also been investigated by several researchers (Bittner, 1977; Kulka and Pragman, 1976 and Zion, 1965). Results of these studies have shown a significant relationship between self-concept and body-concept. It was suggested that self-concept and age are significantly related.

Hutchinson (1977) using Martinek - Zaichkowsky Self-Concept scale reported that no significant relationship was observed between self-concept and body-estimation. On the other hand, Riley (1983) found a significant positive relationship between self-cocept and physical estimation. The researcher suggested that academic achievement, extra-curricular acttivities, teacher's interest and physical health influenced as intervening variables in the relationship between self-esteem and sports participation.

Davis (1992) investigted the role of body image and personality factors among high performance athletes. The findings indicated that a measure of subjective body size was strongly related to weight and dietary concern whereas emotional reactivity was found to be an independent and significant predictor of performance.

Fisher (1965) compared sex differences in body perception and concluded that a woman aware of her body was one, who expresses herself with a clear sense of self activity. It may be argued that their awareness about body may be related to many aspects of behaviour in general and athletic performance in particular.

Gordon (1975) suggested that self-concept is based upon athlete's nature of previous experience of body and his world. If on the whole, life has been satisfying for him, he would develop a picture of self that will be one of adequacy and security. If he had a background of harsh, deprived, inconsistent and cold experiences, the individual may develop either a confused, or a negative view. It is easy to infer that those who have positive body image would be more confident of their behaviour on the field, i.e. their confidence would be reflected in their tactical actions such as the ability to tackle, dribble and shoot the ball at the right moment.

Hamachek (1978) asserted that everyone has a more or less clear perception as to how one would like to look. If there exist a congruence between

the actual body proportions to that of one's ideal body image, he may think better of both the physical self as well as non-physical self. Contrary to it, if one's body image deviates much from the ideal body image, the individual is more likely to have lower self esteem. In such a case his performance will be affected.

Doudlah (1962) studied the relationship between body image, self-concept and movemnt concept of fresh men and women with low and average motor ability on the basis of their performance on the three items of Scott Motor Ability Test. The statistical analyses extended support to the assumptions that there is a significant relationship between self-concept and body image and between body image and movement concept. Significant relationship between self-concept and movement concept, between self-concept and motor ability as well as between body image and motor ability was observed.

Donoghue (1990) analysed the inter-relationships among body esteem, perception of fitness, self-concept and physical fitness of female non-competitive athletes. The investigation aimed to explore the existing theory regarding the effects of physical fitenss on self-concept. The results suggested that the effects of fitness on self-concept are mediated by perception of fitness and body esteem. It was summarised that fitness may not have a direct effect on females self-concepts. The effects were better observed in subject's perception of fitness and levels of body esteem.

Thomas (1972) studied the effect of success and failure in physical activity on body image of college males.

A sample of 68 male undergraduates were randomly assigned to four groups having seventeen subejcts in each group and designated as success, control, failure and non-activity groups. All the subjects were pre and post tested on body image by a Semantic differential measure, except non-activity group. All the subjects were given a fifteen minutes ride on a bicycle ergometer over a five-week period. The findings of the investigation failed to statistically confirm the basic huypothesis as the treatment effects of success, control and failure did not

produce significant differences. Moreover, it appeared that failure in physical activity caused subjects to view their body as significantly less active.

Sloan(1963) explored the relationship between the body image and motor abilities of College men. The test battery administered on the subjects comprised of zig-zag run, standing broad jump, 60 yards dash, wall pass and medicine ball put. Results showed that subjects having a positive body image scored higher on motor ability as compared to those who had a negative attitude towards their body. But Leahy (1966) reported low correlation between self-image and body image.

Adame, Johnson and Cole (1989) conducted their study to find out the relationship among physical fitness, body image, and locus of control. They administered Hall's physical fitness test profile, the Winstead and Cash body self relations Questionnaire and the Locus of control scale of Nowieki-Strickland on a sample of 243 fresh men and women. The findings revealed that (i) Women were found to be more positive about their physical appearance than men, (ii) men were tend to have better physical fitness than the women, (iii) men were comparatively more positive about their physical fitness than women, (iv) both men and women viewed the physical fitness domain of their body image positively, (v) internally oriented women showed higher positive perceptions of the health aspect of their body image as compared to men, (vi) Phsically fit men and women had positive attitudes towards the physical fitness component of their body image, and (vii) Physically fit men differed from physically fit women and men were more internal and held more positive attitudes towards the health dimension of their body image.

Armstrong and Armstrong (1968) attempted to determine the relationship between physical fitness and a dimension of body image among adolescent boys and girls. Results indicated that the relationship between body image and Physical fitness was evident only in girls but not in boys. It is interested that boys are usually encouraged and pressurised to actively participate in physical

activities. This leads them to attain a high level of physical fitness though they might not be really interested in physical activities. The girls on the other hand are usually free to persue physical activities due to their genuine interest. Also greater emotional and physical development of the girls as compared to the boys of the same age group may be another significant factor.

Snyder and Kivlin (1975) in their comparative study of women athletes and non-athletes on measures of psychological well-being and body image, reported higher positive self attitudes among the women gymnasts and basketball players as compared to non-players. They also observed ample evidence of difference between the players of two sports on psychological well-being and body image.

Sugerman and Haronian (1964) investigated the relationship between body type and sophistication of body concept as measured by human figure drawings. They reported that endomorphy or lipid is related positively to a primitive body concept and that mesomorphy or muscularity is positively related to a simply sophisticated body concept. The results further indicated that participation in sports activities might also have a direct effect on their body image. Athletes presumably have more defined concepts of their body boundaries and of their bodies as compared to non-athletes. Lerner (1969-a) conducted a study on male students between the age group of 10-20 years and 90 female students between the age of 16-40 years. The results of both the studies associated the male mesomorphs somatotype with socially 'positive' behavioural descriptions and the male endomorph and ectomorph somatotypes with socially 'negative' qualities.

Alsaker (1992) investigated the relationship between pubertal timing and weight in relation to body image, global negative self-evaluation, depressive tendencies and perceived instability of self-concept. A survey was conducted among 1,109 female and 1,256 male Norwegian adolescents aged between 13 to 16 years. Results indicated that early maturation was related significantly to poor

body image and global negative self-evaluation in girls of 6th, 7th and 8th grades. Late maturation was generally associated with negative self-evaluation in boys whereas maturation was related to more positive evaluations.

Jackson, Ervin and Hodge (1992) examined the relationship between narcisstic personality and body image. Subjects consisting of 307 College students (105 males) were administered the Body-Self Relations Questionnaire and Narcisstic Peronality Inventory. Results indicated that more narcisstic individuals had more favourable body images and were higher in masculinity and self-esteem.

Folk, Pedersen & Cullari (1993) administered Body Satisfaction Questionnaire and the Piers–Harris Children self-concept scale on 29 boys and 18 girls of grade three and 14 boys and 24 girls of grade six. Results showed that boys in 6th grade scored lower on body satisfaction than boys in 3rd grade, and their self-concept scores were positively correlated with self-concept in both grades. For girls apparently the relationship between body satisfaction and self-concept may be present before the onset of the puberty.

Huddy, Neiman and Johnson (1993) explored the relationship between body image and percent body fat among varsity male athletes and non-athletes. Three groups consisting of fifteen swimmers, fifteen footballers and fifteen non-athletes were administered a 20 item questionnare concerned with body image and subsequently underwent skinfold measurement to assess percent body fat. Scores obtained were correlated to estimate the relationship between body image and adiposity. For three groups combined relationship was significant and inverse but no relationship was observed for either of the two groups of athletes.

Davis & others (1993) studied the reasons for men becoming more concerned about physical appearance and reported a greater degree of negative body image than in previous generations. 71 men (aged 18 - 30 Yrs) were administered a battery of psychological tests measuring body esteem,

appearance anxiety, situational trait anxiety and body dissatisfaction. Physical activity participation, percent body fat and heart rate were also measured. The findings suggested that appearance anxiety was inversely related to physical activity participation, but, this association was week and negative when percent body fat was entered as a covariate in the analysis. Appearance anxiety was also predictive of self-reported distress during a body composition valuation, but failed to relate to heart rate increase. Nearly half the variance in appearance anxiety was accounted for by a measure of upper body esteem.

Ebbeck (1994) examined the relationship of age and skill with self perceptions and motivational characteristics of 240 Community Tennis players (aged 10 - 67 years). Professional Tennis Coaches verified the skill rating of each player. Players completed self-reported scales measuring perceived tennis competence, tennis salience, global self-worth, challenge motivational orientation, task and ego orientation, and competitive trait anxiety. Data reveal that age and skill were significantly related to psychological variables, suggesting that an integrated research approach can extend the understanding of self-perception and motivational characteristics in the physical activity setting.

Gustavson and others (1993) tested 43 male and 56 female College students in the United States for body image dissatisfaction using a modified version of the Computer based graphical body image task developed by J.C. Gustavson et. al. A reliable relationship between desired stature and desired body image was observed for women. No reliable discrepancy between desired body image and verbally reported desired stature was shown by men.

Gould & Udry (1994) summarized current research on arousal regulation strategies for enhancing athletic performance. The need to view around as a multifaceted construct made up of both cognitive and psychological components was emphasised, as well as the importance of understanding arousal-performance relationship. Categories of arousal regulation strategies include arousal energizing techniques, bio-feedback techniques, relaxation

response strategies, cognitive behavioural interventions, and mental preparation routines. While these techniques can be effective in influencing arousal and facilitating performance, additional research using more rigorous methods is needed.

Spink (1992) examined the relationship of anxiety about social physique (the perceived evaluation of one's physique by others) to location of participation in physical activity. Thirty seven nursing students completed the Social Physique Anxiety scale and answered questions relating to the location of the physical activity in which they participated. Subjects were assigned to either high or a low anxiety group based on these scores. High Scorers reported a tendency to exercise privately rather than publicly. For high scorers, assessment of fitness may serve as a disincentive and keep them away from public exercise programmes and their inherent benefits.

Davis & Cowles (1991) in their study compared 112 female (aged 14 - 50 Years) and 88 male (aged 16 - 64 Yrs.) self-identified regular exercisers on variables related to body image, weight and diet concerns, and degree of exercise participation. It was observed that most women wanted to lose weight, but men were evenly devided between those who wanted to lose and those who wanted to gain weight. Women were more dissatisfied with their bodies and placed greater importance on their appearance. Women were more likely than men to exercise to lose weight. For young men, greater body satisfaction was associated with increase in exercise participation and with increased body focus.

Melnick & Mookerjee (1991) assessed effects of advanced weight training on body cathexis and self-esteem. 27 college students participated in an advanced weight training course while a control group of 30 completed a physical education major theory course. All subjects were administered Rosenberg Self-Esteem Scale and a Body Cathexis Scale prior to and at the conclusion of a 6 week weight-training programme. Weight training group had higher self-esteem and body cathexis scores than control group due to

significant improvement in body composition and maximal strength-endurance scores.

Imm & Pruitt (1991) investigated the relationship between exercise and body-shape satisfaction in average body weight women. 28 high frequency exercisers, 26 moderate frequency exercisers and 20 non-exercisers (Aged 19 - 20 Yrs.) were considered for the study. The results indicated that the high frequency exercisers had a significantly more negative view of their body shape than a group of moderate exercisers and non- exercisers. In addition, high frequency exercisers were more likely to continue to exercise even when feeling ill than the moderate exercisers. ,

El-Mofty (1991) examined self-concept and body-image in relation to their peers in 40 obese girls and 40 normal weight girls (aged 15-20 yrs.). Subjects completed a projective test in whcih they were to draw themselves with peers. Drawings were analysed regarding dimensions of detail, proportion, perspective and colour. Also the subjects completed the self-concept test for adults three times, which measured realistic and idealistic self- concept and the concept of the ordinary individual. Obese subjects drew themselves larger in size and proportions than their peers as compared to drawings of normal subjects, which was interpreted as an attempt by obese subjects to face their environment. Some obese subjects drew themselves, smaller than their peers, which suggests denial and rejection of their excessive weight. There were no significant differences between the groups on total self-concept test scores.

Balogun and his associates (1992) administered on 286 Nigerian University students (aged 16 - 37 Yrs.) a 25-item version of the Body Cathexis Scale. Subjects were more satisfied than dissatisfied with their body parts. Body weight and general muscle development were aspects with which they were more dissatisfied. As compared with men, women were significantly more satisfied with their ears, body weight, general muscle development, chest/breast size and appearance of sex organs.

McDonald & Thompson (1992) assessed a sample of 100 physically active males and 91 physically active females (aged 17 - 35 Years) for body dissatisfaction, self-esteem, eating disturbances and reasons for engaging in exercise. Results indicate that Women's motivation for exercise was more often related to weight and tone reasons than that of men. For both genders, exercising for weight, tone, and attractiveness reasons were highly correlated with other measures of disturbance. Exercising because of health was associated positively with self-esteem for both sexes. Exercising for fitness was related to higher self-esteem for men.

Dinucci and Others (1994) analysed body esteem using three of its sub-scales to determine the effect of group participation on body esteem. Subjects were inter-collegiate women athletes (9 basketball, 10 volleyball, and 12 softball players) and a control group of 34 women non-athletes. Scores on weight concern and physical condition signficantly discriminated between the groups. On weight concern, the mean of the control group was significantly lower than the mean of the athletic groups. On physical condition, the control group mean was significantly lower than that of the basketball group. Other comparisons were not significant.

We may legitimately conclude that Body Image has not been as vigorously investigated as self-concept. Also the relation between body image and performance as such has not been reported.

Adjustment And Performance :

Robert (1956) has considered the concept of adjustment as a interaction between the person and his environment, each asserting demand on the other. In most cases, adjustment is a compromise between the two. Cronbach (1960) described adjustment as a means to the end of accomplishment. The adjusted person is one who commits himself to socially desirable goals and makes use of his energies efficiently towards their accomplishment.

Frost (1970) warned that social and cultural forces are operating constantly and a meticulous understanding of these is absolutely necessary in any attempt to unreveal the factors causing revealing behaviour and its change in sports settings.

In a similar study, Maxeiner (1983) reported that successful Volleyball players were emotionally more suitable than the lower level players. Morgan and John (1978) administering MM personality Inventary reported that successful atheletes possess more desirable social traits than the un-successful athletes.

Verma (1975) reported that athletes participating in individual sports prefer their own decision whereas athletes of team sports are sound followers and group dependant. Kroll and Peterson (1965) compared the personality profiles of successful and unsuccessful players. The winner were found to be self controlled socially bolder and better integrated than the losers.

Sharma (1993) explored the relationship between adjustment and performance of team athletes. Bell's Adjustment Inventory (1962) was administered on a randomly selected sample of 240 male athletes drawn from the colleges of Chandigarh. The results suggested that the relationship existed between high performance football players with regard to health adjustment only. Low performance basketball players showed negative relationship on health and emotional adjustment.

Biddulph (1954) observed differences between superior athletic groups and less skilled groups. The superior athletes showed higher level of personal and social adjustment than less skilled athletes. He advocated that adjustment has a positive relationship with athletic performance. VanYperen, (1995) studied casual relationship between performance level and inter-personal stress among the 65 highly skilled soccer players aged 15 - 22 years. Special attention was paid to the moderating effect of parental support. No evidence was found that interpersonal stress within the team was an important determinant of performance level. It was reported that the low performance level leads to

negative feelings about the social adjustment within the team specifically when there was a perceived lack of parental support. The findings of this study has advocated the influence of home and social climate on performance of players.

Panda and Biswas (1989) examined the personality adjustment of high and low achieving Football players. Fifty high and fifty low achieving Football players matched on age (between 20 - 25 years), education, birth order, and social status were administered the Moudsley Personality Inventory and the Essenck Personality Inventory Psychoticism Scale. Players with high achievements were found to be more extroverted, confident, anxious, emotional, phobic and tender minded as compared to the football players with low achievement. High achievers scored higher on psychoticism scale than low achievers. Bhushan and Agarwal (1978) using 16 PF questionnaire reported that high achieving athletes showed significant emotional stability and dominance as compared to the low achieving athletes. Slepicka (1975) studied the influence of various types of interpersonal behaviour on effectiveness of sports groups. Results indicated that the successful athletes were more cooperative and emotionally stable than the unsuccessful ones.

This is true about individual games as well as team games. The performance of the team games would hardly depend on individual performance alone. The basic requirement of a team game is full understanding between the players, their intense interaction on the field, their emotional maturity and capability to understand the strength and weakness of each other.

Nangia and Sengar (1989) investigated the differences in the level of adjustment of sportsmen and sports women as well as between athletes and non-athletes. Sinha and Singh adjustment Inventory (AICS) (1980) was administered on 320 athletes and non- athletes of University level. Subjects included players of baseball, volleyball, Cricket, athletics, Badminton, Table-Tennis, Hockey (athletes group) and a group of non-athletes. 't' test was used for statistical analysis. Findings indicated significant differences in adjustment level

of athletes and non- athletes. Significant differences were also observed in the players of team and individual sports.

Kumari (1988) studied the adjustment of sports and non-sports school girls of Himachal Pradesh. The sample consisted of 600 girls (300 sports and 300 non-sports girls). The Adjustment Inventory by Sinha and Singh (1984) for School students was used. It was reported that sports girls belonging to rural and urban areas were better on all dimensions of adjustment i.e. emotional, social and educational than non-sports girls. Significant differences between rural and urban girls on emotional, social and educational adjustment were found. The rural sports girls were found to have better emotional adjustment as compared to the urban sports girls. On social adjustment sports and non-sports rural girls were also found better as compared to their urban counterparts. However, the urban girls (both sports and non-sports) were found better than the rural sports girls in educational adjustment.

Bhatti (1987) gauged the level of adjustment of athletes and non- athletes by administering Bell's Adjustment Inventory. A descriptive analysis showed that home adjustment of non-athletes was significantly higher than athletes. No differences were observed in their health, social and emotional adjustment. Basketball group was found to be emotionally better adjusted than non-athletes. Football group was found to be superior in health adjustment, but inferior in social adjustment as compared to non-athletes. No difference were observed in home and emotional adjustment.

Rani (1974), using Bell's Adjustment Inventory examined the personality adjustment differences among 170 athletes and non-athletes. The data was analysed by using Mean, Standard Deviation (SD) and t-ratio. She reported that difference in personality adjustment of athletes and non-athletes was significant. In the individual events, badminton players had better home adjustment than track and field athletes, wrestlers and tennis players. In team games hockey players were better adjusted on health as compared to football, volleyball and

basketball players. Non- athletes tended to have better home adjustment and poor health adjustment than athletes. Similarly, Koening (1969) assessed personality differeneces between basketball players and non-athletes. Significant differences were found pertaining to sociability, emotional control and group orientation between athletes and non-athletes.

Grewal (1986) investigated inter-peronal relationship of physical fitness and attitude towards physical activity and adjustment among 549 students of various Colleges of Punjab University, Chandigarh. The findings revealed a significant relationship between attitude towards physical activity and adjustment. However, no significant relationship was found between physical fitness and attitude towards physical activity. Robert (1964) administering the AAHPER Physical fitness Test and the Washburne Social Adjustment Inventory evaluated the physical fitness and adjustment of College Students. No significant differeneces in the scores of basketball and football players on the adjustment inventory were found at .05 level. He suggested that various factors must be thoroughly studied to determine the need of players to help them in their emotional and social adjustment.

Alegaonkar (1989) studied self-concept, adjustment and physical fitness of sixty-two boys in the age group of 12-14 years. The results suggested that self-concept was associated with some of physical fitness aspects. It was concluded that the self-concept and physical fitness were highly related and also adjustment was related significantly with self-concept and physical fitness.

Brownfain (1952) reported that individuals with stable self-concept were better adjusted than their counterparts with instable self-concept. The former were found to be free from inferiority compelx, better liked by others and showed less evidence of compensatory defensive behaviour. This finidng is important for the players of team games.

Donahue and others (1993) studied the relationship between self- concept differentiation, the tendency to see one-self as having different personality characteristics in different social roles, and psychological adjustment. The sample

was drawn from College students and middle aged women separately. In both the studies, subjects with high level self-concept differentiation showed poor emotional adjustment and tended to low socialisation. Longitudinal analysis demonstrated same characteristics measured at the age of 21, predicted self-concept differeation measured more than 30 years later in middle age. The findings advocated that self-concept differentiation was a sign of fragmentation of the self rather than specialisation of role identities and the social context was also an important determinant of self-concept differentiation. The above quoted studies were designed to assess the differences of adjustment of male and female athletes but our investigation does not take into account gender differences and it is only related to hockey players at the University level.

Bala (1994) studied the realtionship of anxiety, self-concept and adjustment with the performance of Volleyball players. She used self-concept Questionnaire of Saraswat (1984), Adjustment Inventory of Sinha and Singh (1980) and State Trait Anxiety Inventory of Roma and Tiwari (1984). The sample of 500 male and female volleyball players was randomly selected from the colleges affiliated to various Universities of Haryana. The age of the subjects ranged between 17 to 24 years. Analysis of Variance (ANOVA) was used to explore the significance of differeneces and interaction of sex and performance for each variable. 't' ratios were also computed to assess the level of significance of the differences. The findings indicated that (i) male College Volleyball Players (high performers) were significantly better on health, emotional and total adjustment than the low performers (ii) no significant differences were observed between the two groups on home, social and educational adjustment. Male players were significantly better than female players on home, social, emotional and on total adjustment. However, no significant differences were observed between two groups on health and educational adjustment.

Sharma (1984) administering Cattel's 16 PF Questionnaire, suggested that aggressiveness had been retained by the basketball, football and volleyball groups barring hockey players. Similarly, emotional stability had been found in the personality profiles of football and hockey players. But the same factor was

not retained by the players of basketball and volleyball groups. Social precision was observed in the personality structure of football, hockey and volleyball players. Findings also revealed that the sportsmen representing University teams tend to be emotionally stable, conscious, trusting, group dependent and practical.

Mann (1988) compared the psychological characterstics of individual and team athletes. A total numbe of 202 University athletes (88 individual and 114 team games) were administered Sinha and Singh (1980) Adjustment Inventory for College Students, Mohan and Virdi personality Questionnaire (1985) and Mohan's cognitive vigilance Task (1982). Using multivariate analytical procedures it was found that (i) Individual and team athletes do not significant differ from one another on various areas of adjustment except educational adjustment, where the difference was found to be significantly, (ii) Marked inter-sports differences on all areas of adjustment, were reported; (iii) The athletes of basketball, boxing and handball groups indicated significantly better alround adjustment, whereas the athletes from track and field and hockey groups being poor on adjustment had differed considerably from other sports groups. Successful athletes differed significantly from unsuccessful athletes on all areas of adjustment.

Kaur (1992) studied the relationship between adjustment with regard to performance and gender in team sports. Sinha and Singh (1980) Adjustment Inventory was administered on a sample of 320 athletes (160 male and 160 female) randomly selected from College and Universities of Haryana and Chandigarh. The following inferences were drawn :

(i) College and University athletes differed significantly on Social, emotional and total adjustments.

(ii) The male athletes from the team sports were found better adjusted than the female athletes from the same sports on all the areas of adjustment, except home wherein the differences between the two groups were insignificant.

In a well designed investigation Yadav (1992) studied personality traits,

adjustment and socio-economic status of 400 University and College level football, volleyball, basketbal, handball, cricket, badminton and lawn tennis players. The findings indicated that team sports athletes scored significantly higher than individual sports players on health, social, emotional and educational adjustments. The basketball and handball players were found better adjusted as compared to all other groups on health and home adjustments respectively.

Antonelli and Mascellani (1973) studied adjustment of 351 Italian elite athletes by administering Bell's Adjustment Inventory (1962). They observed that male athletes were better adjusted than female athletes. It was reported that the athletes from volleyball, fencing, track and field and sailing were better adjusted than athletes belonging to cycling, rowing and gymnastic events.

Rajamanickam and Vasanthal (1993) investigated the adjustment problems of adolescents. The sample consisted of 300 students drawn from one of the districts of Tamil Nadu. The personal Information Questionnaire and Bell's Adjustment Inventory (1962) were administered to the students. The results indicated a positive relationship between the students' adjustment scores and their achievement scores. Parent's higher educational level had positive effect on students' adjustment and achievements. Also, parents' occupational level had some positive effect upon their children's adjustment and achievement.

It has already been mentioned elsewhere that self-concept, body image, adjustment and performance of hockey players has not been researched except isolated attempts to do so. While reviewing the studies care has been taken to incorporate gender differences, game specific differences and such other aspects. The review will immensely help in designing the research, appropriate selection of tools of measurement and in determining the methods of statistical analyses.

* * *

CHAPTER

THREE

RESEARCH METHODOLOGY

RSEARCH METHODOLOGY

It is customary in physical sciences to describe, explain, predict and control the phenomena with which they deal. The behavioural sciences too attempt to describe behaviour in a similar manner. Scientists endeavour to use observation as a basis for answering questions of interest. (Lindzey, 1954; Festinger and Katz, 1953; Selltiz et al., 1964; Underwood 1957; Stollak and others, 1966; Megargee, 1966; and Shontz, 1965). In other words we can say that scientists ascertain facts and analyse them in an unbiased manner to draw conclusions. Research design obviously plays a significant role in drawing inference using behavioural observations on a limited number of subjects and making predictions about the behaviour of the larger group represented by the subjects. Edwards (1968) believes that in research we do not haphazardly make observations of any and all kinds but rather our attention is directed towards those observations that "we believe to be relevant to the questions we have previously formulated". His contention reflects the point that researches should be well planned and must be carried out using sound means and techniques of investigations.

Lindquist (1956) pointed out that the "researches are designed to proceed in a planned manner to control variance and to answer pertinent research questions". The design is the general structure of the experiment, not its specific contents (Myers, 1980). Mohsin (1984) opines that, "research design depicts the plan which states the relation between observed facts and events on the basis of which conclusions could be drawn". Further elaborating Ferguson (1981) asserts that several methodological approaches and designs have been developed but the choice of appropriate design depends upon the special characteristics of the sample, nature of measuring instruments and restraints regarding the manupulations of variables being studied. Thus, the choice of a method is governed by the aims of the study, the variables under investigation and the nature of the data.

The review of relevant literature in the preceding chapter has given direction in explicitly explaining the objectives of the study and in selecting the methods to be adopted for carrying out the research. We observed that host of psychological factors such as anxiety, motivation, neuroticism, level of aspiration, will power, introversion, extroversion, self-confidence, self consistency and other personality characteristics influence sports performance. The review of literature concerning the performance also revealed that relationship between sports performance and the psychological variables such as self-concept, adjustment, body image, mental stress, anxiety, motivation and level of aspiration have been thoroughly investigated but its relation with the performance of hockey players have not been investigated to the desired extent by Indian researchers. Thus, keeping in view the importance of psychological variables for high level performance and also the dearth of research in the area, the present endeavour to study the self-concept, body image, adjustment and performance of hockey players has been undertaken.

Sample :

The present study was conducted on hockey players of the Universities of Uttar Pradesh to investigate the influence of psychological factors i.e. self-concept, body image and adjustment on performance.

Uttar Pradesh Inter-varsity hockey championship, a regular feature of the U.P. Sports Directorate since 1986, was organised at Regional Sports Stadium, Gorakhpur from November 14 to 19, 1994. This tournament is aimed to provide an exposure to the players of the University hockey teams of Uttar Pradesh to display their skill and talents. This Championship is considered by expert as a warm-up for the All India Hockey Inter-varsity Championship. Thus, the venue of U.P. Inter-varsity Hockey Championship, 1994 was considered most suitable to conduct the present investigation. Although seventeen Universities had confirmed their entries, but, out of that only fourteen teams participated in the tournament consisting sixteen players in each team. Thus a total 224 players took part in the tournament.

A list of each team, with the help of eligibility proforma submitted by them, was prepared and the players were approached through the Managers and coaches of the respective University teams for obtaining the responses on Self-concept Scale (Rastogi, 1979), Adjustment Inventory for College Students (Sinha and Singh, 1980), and Body Image Q. Sort Statements (Singh, 1991). The performance of the players was evaluated and rated by a panel of three experts on the play ground during the matches. The complete information of participating teams is given below : –

List Of The Participating Universities

S. No.	Name of the University	Number of Players
1.	Agra University	16
2.	Aligarh Muslim University	16
3.	Allahabad University	16
4.	Avadh University, Faizabad	16
5.	Banaras Hindu University	16
6.	Bundelkhand University, Jhansi	16
7.	Ch. Charan Singh University, Meerut	16
8.	C.S. Azad Agriculture University, Kanpur	16
9.	Gorakhpur University	16
10.	Gurukul Kangri University, Haridwar	16
11.	H.N. Bahuguna University, Garhwal	16
12.	Kumaon University, Nainital	16
13.	Lucknow University	16
14.	Rohelkhand University, Bareilly	16

Total Number of Players 224

TOOLS USED

Proforma for Performance Rating :

The performance of players was rated by a panel of experts on a 10 points scale-ranging from 'poor' to 'excellent'. The components of performance were

skillfulness, positional play, tactical ability, team spirit, anticipation, decision making, ability to exploit the weak points of the opponents, perseverance, general behaviour and understanding with the team mates (Appendix - I)

These items were rated by the experts giving minimum one point to a maximum of ten points. The average score of each player rated by the three experts was considered to measure the performance of the players.

Self-concept Scale :

Self-Concept Scale developed by Rastogi (1979) was used to measure self-concept of the players. It is a five points scale having 51 items. The scale was based on Likert's scaling technique. Test-retest reliability based on a sample of 342 respondents was found to be .87 (Appendix - II).

Body Image Test :

Body Image was measured with the help of a Q-Sort statements tool initially developed by Doudlah (1962) and standardised and adapted under Indian conditions by Singh (1991). The original scale having 75 items was evaluated by ten Judges for their appropriateness under Indian conditions. The scale was administered to a sample of 100 students. Those statements which yielded correlation-coefficient ranging from .65 to point .80 were retained. Thus, the adapted version has 50 statements. It is a Likert type five points scale having split-half reliability coefficient equal to .78 (Appendix- III).

Adjustment Inventory For College Students :

The scale was developed by Sinha and Singh (1980). It is a popular tool for measuring all the dimensions of adjustment such as home, health, social, emotional and educational. This inventory contains 60 statements and each statement possesses two alternatives. The inventory has a key for scoring. High score indicates low level of adjustment and low score refers high level of adjustment. The test-retest reliability coefficient of the scale was .71 (Appendix - IV).

Statistical Analysis :

Statistics provides the strategy and methods for gathering the maximum amount of informations for a given expenditure of time and other resources. Once the relevant information is obtained, the investigator requires methods to describe and summarize his data so that the results are interpretable and could be communicated (Mendenhall & Ramey, 1973). Investigation in behavioural sciences classify the nature of a relationship between behaviour and its determinants. In this regard behavioural scientists seek to examine the relationships between various dependant variables and the relevant independent variable/variables.

Reiterating the objectives of the study we have to point out that we intend to investigate the inflence of self-concept, body image and adjustment on performance of hockey players. Every varibale was dichotomized. For example self-concept was classified as 'High' and 'Low'. The 'High' and 'Low' classification was based on Quartile Values (Q1) and (Q3).

The product-moment coefficient of correlation was used to determine the relationship of each variable. The term 'correlation' is commonly used to refer to any sort of relationship between objects or events. But in statistics the term 'correlation' refers exclusively to relationships between variables which can be quantified. If the relationship is such that higher values of one variable tend to be associated with higher values of the other, the correlation is 'positive'; when large values of one tend to be associated with small values of the other, the correlation is 'negative' (Ferguson, 1981 and Tate, 1955). Since statistical correlation provides a quantitative method by which relationships can be investigated, it is a most useful tool in social research. Product-Moment Coefficient of Correlation is widely used and is considered best measure of Correlation. It is a measure of coefficient of correlation between the variables, independent of the size of the sample and the units of measurement, and can be determined by dividing the mean product of the paired deviation scores by the standard deviations of the scores.

Thus, at the first instance the Product moment correlation of coefficient was computed to ascertain the relationship of independent variables i.e. self-concept, body image and adjustment. Furthermore the correlation of these independent variables to performance (dependant variable) was also determined.

Subsequently for analysing the data 'Multiple Regression Analysis' was used. Multiple regression analysis is the method of studying the influence of several independant variables on the dependant one. It forms a linear composite of explanatory variables in such a way that it has maximum correlation with the criterion variable (Kothari, 1987). Regression analysis is primarily concerned with estimating or predicting the mean value of the dependant variable on the basis of the known values of one or more explanatory variables (Dellow and Goldstain, 1984). Kerlinger (1978) suggests that Multiple regression is a method for studying the effects and magnitudes of the effects of more than one independent variables on dependant variable using principles of correlation and regression.

The objectives of this analysis were to make a prediction about the dependant variable based on the covariance with all the concerned independent variables. This technique is appropriate when we have single metric criterion variable which is supposed to be the function of other independent variables. Moreover, multiple regression technique relates independent to the dependant variables in a manner which also takes interactive effects into accounts (Kothari, 1987). It has another feature of flexibility. It does not impose any restriction on the independent variables whether they are correlated or uncorrelated.

There exists variations of multiple regression analysis. They are standard multiple regression, hierarchical and step-wise regression. Whenever, the relationship among the variables is to be determined, the standard multiple regression analysis is considered as a suitable measure of multiple regression. In hierarchical regression the researcher controls entry of variables into regression equation on the basis of some theoretical considerations. In case of step-wise regression technique the investigator adds the independent contribution of each

explanatory variable into the prediction equation one by one, computing the squared multiple correlation (R2) (Garrett, 1969). In the present investigation we used standard multiple regression which is concerned with the study of how one or more variables affect change in another variable. This analysis also calls for entry of all the independent variables into the regression equation at once. Each independent variable then can be evaluated in terms of what it adds to prediction of the dependant variable.

* * *

CHAPTER

F

O

U

R

RESULT & DISCUSSION

RESULT & DISCUSSION

In the preceding chapters the investingator has discussed the theoretical issues and highlighted the aims and objectives of the present study. Research design, hypotheses, process of data collecting and analysing the data were also broadly stated.

The objectives of scientific endeavour are to design a study, analyse the data, present the findings and discuss them (McGuigan, 1968; McNemar, 1962; Edwards 1971; Mendenhall and Ramey, 1973; and Seigal and Castellan, 1989). The most challenging task for researchers is to interpret the results obtained so as to understand human behaviour. First of all product moment correlation coefficient was computed to ascertain the correlation among the independent variables (self-concept, body image and adjustment) and also their relationship with performance (dependant variable) of hockey players. The results are depicted in Table 4.1.

TABLE - 4.1

Correlation table of Variables

S. No.	Variable	df	r	Level of significance
1	Self-concept *vs.* Body Image	222	0.816	* *
2.	Self-concept *vs.* Adjustment	222	0.885	* *
3.	Body Image *vs.* Adjustment	222	0.494	* *
4.	Self-concept *vs.* Performance	222	0.728	* *
5.	Body Image *vs.* Performance	222	0.201	* *
6.	Adjustment *vs.* Performance	222	0.931	* *

*** * Significant at .01 level**

It is clearly evident from the above table that all the independent variables (self-concept, body image and adjustment) are significantly correlated to each other at .01 level. The relationship of these independent variables with performance (dependant variable) was also found to be significant at .01 level. Although the correlation of Body Image to Adjustment and performance was significant at .01 level but, the intensity of their relationships were found to be low as compared to other variables.

Multiple regression analysis was applied for predicting performance which has been considered as the dependant variable. The predictor variables were slef-concept, body image and adjustment. The Investigator is now in the last phase of the study and the results obtained through the analysis are discussed below.

TABLE 4.2

Analysis of Variance for the Regression

Source of Variation	df	Sum of Squares	Mean Squares	F-Value
Attributable to Regression	18	3.593	0.199	6.31**
Deviation from Regression	37	1.170	0.031	
Total	55	4.764		

*** * Significant at .01 level**

The F-Value (6.31) was found significant at .01 level which clearly indicates that the independent variables cummulatively influenced performance of hockey players. But it can not be inferred precisely which particular independent variable could be considered as the predictor of high performance of hockey players. For this purpose multiple regression analysis was undertaken and the results are reported in Table 4.3

TABLE 4.3

Multiple Regression Analysis

(High Performance Group)

N = 56

Variable	Mean	SD	Value of r	Reg. Coefficient	Std. Error of Reg. Coefficient	Computed t-Value
Self-Concept	174.928	24.32	-0.038	-0.004	0.00075	5.41 **
Body Image	114.571	20.62	-0.374	-0.006	0.00109	5.89 **
Adjustment	29.053	10.626	0.085	0.011	0.00232	4.93 **

*** * Significant at .01 level**

It is evident that all the independent variables have emerged as predictors of high performance.

It may be reiterated that self concept scale had 10 dimensions, adjustment scale had 5 dimensions and body image scale yielded simply total score. Further analyses were undertaken to determine the influence of each dimension of the above mentioned scales on performance (Table 4.4).

TABLE 4.4

Multiple Regression Analysis

(High Performance Group)

Dimensions of Self-concept Variable	Mean	SD	Value of 'r'	Regression Coefficient	Std. Error of Reg. Coefficient	t-Value
Health & Sex Appropriate-ness	22.267	3.482	-0.013	-0.119	0.009	13.08 * *
Abilities	28.642	4.100	-0.286	-0.004	0.006	0.65
Self-Confidence	19.392	13.828	0.107	-0.006	0.001	3.38 * *
Self-Acceptance	14.839	3.846	-0.227	-0.073	0.005	13.21 * *
Worthiness	22.928	3.340	-0.081	-0.026	0.007	3.72 * *
Present Past & Future	15.571	3.120	0.182	-0.016	0.007	2.02
Beliefs and Convictions	10.482	1.935	-0.208	-0.151	0.012	12.57 * *
Feeling of Shame & Guilt	14.125	3.722	0.013	0.053	0.062	8.58 * *
Sociability	14.589	13.307	0.024	-0.010	0.001	5.37 * *
Emotional Maturity	12.089	2.602	0.227	-0.045	0.009	4.95 * *

*** * Significant at .01 Level**

A cursory glance over Table No. 4.4 reveals that out of ten dimensions of self-concept, eight have emerged as significant predictors of high performance group. t-values indicate that health and sex, self-confidence, self-acceptance, worthiness, beliefs and convictions, feeling of shame and guilt, sociability and emotional maturity standout as significant predictors of performance. Only two dimensions namely abilities and present, past and future did not emerge as predictors of performance.

Analyses of the dimensions of adjustment are reported in Table 4.5 below:

TABLE 4.5

Multiple Regression Analysis

(High Performance Group)

Dimensions of Adjustment Variable	Mean	SD	Value of 'r'	Regression Coefficient	Std. Error of Regression Coefficient	t-Value
Home Adjustment	3.589	2.477	0.01476	-0.009	0.009	1.07
Health Adjustment	3.017	2.700	0.00054	0.063	0.009	6.91* *
Social Adjustment	6.303	2.928	0.07690	-0.005	0.008	0.65
Emotional Adjustm- ent	10.107	4.781	0.12217	0.031	0.005	6.00 * *
Educational Adjustment	6.035	2.455	0.02613	0.018	0.009	1.92

*** * Significant at .01 level**

It is observed that health and emotional adjustment are the predictors of high performance, whereas home, social and educational adjustments were not found to influence performance.

After having determined the predictors of high performance group we further determined the preditors of low performance group. The results are reported in Table 4.6

TABLE 4.6

Analysis of Variance for the Regression

(Low Performance Group)

Source of Variation	df	Sum of Squares	Mean Squares	F-Value
Attributable to Regression	18	-13.769	-0.764	0.584
Deviation from Regression	37	48.423	1.308	Insignificant
Total	55	34.653		

Insignificant at .01 level

None of the independent variables has emerged as predictor for the low performance group. The result is in the expected direction.

It has been empirically determined that self-concept, body image and adjustment influence performance. In other words high performers had high self concept, favourable body image and were better adjusted.

It has been reported earlier that out of ten, eight dimensions of self-concept were found as predictors of high performance. These dimensions are : health and sex appropriateness, self-confidence, self-acceptance, worthiness, beliefs and convictions, feeling of shame & guilt, sociability and emotional maturity. Self- confidence, self-acceptance and worthiness are those aspects of personality which are closely interrelated. Unless one has a feeling of worthiness one cannot develop self-confidence. Again, if one can not develop self-acceptance he or she may not have feeling of self-confidence and worthiness. It may be argued that those who possess self-confidence, self-acceptance and feeling of worthiness may face situationwith courage and would display the capacity to accept challenges. These personality aspects must be possessed by outstanding sportsmen if they intend to perform well. Hockey is a team game which demands that the players should have the confidence to rely on their skills and experience to face the fast changing situations that they have

to encounter during the play. Self-confidence, self-acceptance and worthiness of a player may inspire his team mates to do well during the matches.

An emotionally mature player would maintain his coolness and would make best use of fitness together with techno-tactical skills. He will not be easily provoked. In a state of provocation one may not maintain his composure and in all probability one is liable to forget his game plan or may violate the rules and regulations. For violating rules and regulations one may be penalised by the umpires, with the result that the other members of his team may be demoralised and it may elicit adverse audience reactions. Thus it is quite legitimate to infer that emotional maturity should be considered as an important component of good performance.

Sociability i.e. the group cohesiveness and the capacity of a player to interact with his team-mates is a very important aspect for team games such as hockey. By interacting with each other one may have fair assessment of weaknesses and strengths of his team- mates. Such assessment would help a player to control the game in such a way that the weak points of the team-mates are covered and the strong points are exploited to yield desired results.

Beliefs and convictions and feeling of shame and guilt may lessen self-confidence and feeling of worthiness which may ultimately affect one's performance. One should have firm beliefs and convictions of performing well and simple errors committed during the game should not lead to feeling of shame and guilt. An emotionally mature player knows that he may commit errors knowingly or unknowingly for which he should not be unduly concerned. The right approach should be to rectify the errors and try to compensate. An emotionally mature player would not be a prey of defence mechanism and accuse others for the errors committed by him.

Health and sex appropriateness has also emerged as predictor of high performance. The game of hockey demands as much physical fitness as positive mental attitudes of the players. A good player has to be physically fit, robust and

also possess healthy mental attitudes such as self-confidence, sense of worthiness, emotional maturity, etc.

The inferences drawn by the researcher are supported by the following research findings :

Johnson, Hutton & Johnson (1954) found athletes having strong self-concept were more confident, assured and assertive in their actions and sports task they perform.

Pate (1973) concluded that winning performence tend to have a significant positive impact on the Wrestler's concept of self. Lower level of self-concept was observed in the wrestlers who did not perform well. Contrary to it, wrestlers who have a high level of winning performance demonstrated a significantly higher positive self-concept.

Singh & Debnath (1986) explored the relationship of competitive performance and self-concept of Indian Gymnasts. They indicated that the higher performance group scored significantly higher on self-concept as compared to poor performance group. They claimed that the better sports performance of the group could be attributed to its better self-concept. Similarly Sharma, Shukla and Dwivedi (1990) obtained positive correlation between competitive performance and self-concept of Indian Cricket Players.

Riley (1983) studied the relationship between self-concept and physical performance. He observed a significant positive correlation between self-concept and performance. French (1977) in a study of school children found a significant positive relationship between self-concept and athletic ability. Anderson (1979) found that the subjects who achieved high grades in boxing had significantly positive high self-concept.

Brownfain (1952) found that individuals with stable self-concept were better adjusted than their counterparts with instable self- concept. They were also found to be free from inferiority complex, better liked by others and witnessed less compensatory defensive behaviour.

Olszewska (1982) studied the relationship between self-image and self-esteem of soccer, volleyball and handball players. The results showed that players who achieved a high level of performance effectiveness had high self-image.

Kumari (1988) investigated the self-concept of sports school and non-sports school girls of Himachal Pradesh. The results indicated that sports school girls scored higher on physical, social and temperamental self-concept as compared to non-sports school girls of the same areas.

Sharma (1993) investigated relationship of self-concept and adjustment to performance of team players. Significant differences were found among four groups on moral, intellectual and total self- concept.

Poret, Lufi and Tenenbaum (1989) studied the effect of psychological variables including self-concept on 20 competitive gymnasts during one year longitudinal study. Following a year of training, subjects participated in gymnastics competetion. Ten psychological measures accounted for the performance variance. Personal self-concept was found to be the best predictor of successful performance followed by locus of control, identity self-concept and trait anxiety.

DeMoja and Dirosa (1994) compared mean personality scores of Competitive Skiers and amateur skiers to evaluate their psychological characteristics. The results indicated that competitive skiers showed more need for achievement, dominance, exhibition, endurance and a more positive ideal self.

Schendel (1970) reported that athletes possessed high sense of personal worth and high self-concept as compared to non-athletes. Similar result has been reported by Koening (1969).

Singh, Mall & Gujar (1988) assessed the personality traits of the goldmedalists national champion women basketball players. The results showed that the goldmedalists were found to be more emotionally stable, confident,

self-disciplined, relaxed, tender minded, vigorous, group dependant, aggressive, warm hearted, and easy going.

We may be permitted to cite a case study about the performance of Indian Hockey Team in SAF Games organised at Madras (Chennai) during the fag end of 1995. Almost every reporter and some of the experts praised the performance of Pakistan Team and many of them considered our arch rivals to be the outright winners. India and Pakistan clashed in the final of the above mentioned tournament. As regards the skill of individual players of Indian team and their physical fitness were never in doubt. But the basic consideration was coordination and cohesiveness among the players of two teams. Going through the press comments and statements of Pakistan team Captain and Manager it was clearly apparent that the Indian team was underestimated by their opponents due to which our rivals lacked urgency and meaningful thrust. During the first twenty minutes Pakistan failed to convert the penalty-corners but India capitalised the penalty-corners into goals and before breather stablished a 2 - 0 lead. This served as a booster for the Indian team and further forced their mental make-up and determination to excell with the result that India recorded a 5-0 victory over its traditional rivals. Personally it is believed that our opponent's confidence and rhythm were shattered from which they could not recover.

It has to be mentioned that body image emerged as predictor of high performance. But for the low performing group it was not found as predictor of performance. Also the body image scale yielded total score and it was not devided into various components. The results clearly indicate that high performers, by and large, has considerably a positive feeling towards their body image as compared to their low performing counterparts. The feeling of positive body image may induce the feeling of self-confidence in a player which is vital for performaing well during the competition. It is plausible that positive body image may be instrumental in producing better mental make-up among the players who are inclined to improve their performance. Psychologically the feeling of positive

body image may be responsible for developing sense of determination and worthiness among the players. Sporstmen derive immediate satisfaction from executing successful movements during the game and contrary to it their failure in movements execution causes the athletes to view their body significantly less active. Any player who would be suffering from feeling of physical and mental deficiency may not give best performance.

The results of the study correlate with the findings of Sloan (1963) who suggested that the players having a positive body image demonstrated better motor performance as compared to those who had a negative attitude towards their body. Similarly Thomas (1972) reported that failure in sports activity caused athletes to view their body as significantly less active.

The findings of the study also support the results of Fallon (1990), Friedman (1991) and Cash & Others (1986) who found a positive relationship between body image and psychological well being. They suggested that people who like their appearance, physical fitness, health and sexual attractiveness tend to feel happier and well adjusted as compared to those who have negative attitudes towards their body.

Bennet and Others (1987) were especially impressed by the findings that people who cared about fitness and health had more positive feelings about their appearance than those who were more concerned with their appearance. Fitness and health are more closely tied to a satisfying body image.

The results of the investigation also support the findings of Dinucci & Others (1994) who found that athletes and non-athletes significantly differed on body image score. On weight concern, the mean of the control group was appreciably lower than the mean of the athletics group. On physical condition, the control group mean was significantly lower than that of athletics group.

We should be permitted to point out that adjustment has also been found predictor of high performance. The dimensions of adjustment were : home, health, social, emotional and educational. Analysis has revealed that health and

emotional adjustment were found as important predictors of high performance. The present findings reaffirm our earlier finidngs. Health adjustment is related to one's feeling about one's physique and emotional adjustment reflects balanced emotionality of the individual. The present finding indicates that one should have healthy outlook towards one's health as well as balanced emotionality for giving good performance in games and sports.

Bala (1994) explored the relationship of anxiety, self-concept and adjustment to performance of University and College level male volleyball players. Results revealed that high performers were significantly better on health, emotional and on total adjustment than the low performers. No significant differences were found between the two groups on home, social and educational adjustment.

The findings of the study relate to the conclusions of Biddulph (1954) who reported that superior athletes possessed higher level of personal and social adjustment as compared to less skilled athletes. Similarly Mann (1988) found that the successful athletes significantly differed from unsuccessful athletes on all the dimensions of adjustment.

Yadav (1992) observed that mass sports athletes scored significantly higher than the athletes of class sports on health, social, emotional and educational adjustment. It was also found that successful athletes were significantly better on health adjustments to that of low level players. Sharma (1993) found high performance football players significantly better on health adjustment.

The findings of the study also support the results of Bhushan and Agarwal (1978) and Slepicka (1975) who reported that high achieving and successful athletes were more co-operative and emotionally stable than the low achieving and unsuccessful athletes.

Conclusions :

Summarising our findings we may conclude that the players who achieved

a high level of performance scored higher on self- concept, body image and adjustment than the players with a low level performance. We can thus, assume that the high performing hockey players possess high self-concept. They have positive attitude towards their body and are well adjusted. Such players act in perfect co-ordination with others and being alert about the game and totally focussed all the time during the competition. Players who demonstrate high level of performance are capable of controlling their behaviour and emotions as well as maintaining a high level of techno-tactical actions during the competitions. High self-concept is probably one of the most impotant factors for performance enhancement. Hockey players while training or competing are greatly involved with their bodies and the fulfilment of their aspirations for personal and group success depends largely on the skill and conditioning of their bodies. Positive attitude towards one's body brings confidence and satisfaction to the player during the course of a match. Thus, it may be reiterated that high self concept, positive body image and proper adjustment of players are indispensable for good performance. Hence, due considerations should be given to the psychological conditioning of athletes alongwith the development of motor components and techno-tactical capabilities during the selection and training process of hockey players.

Suggestions For Future Research :

It must be borne in mind that although the findings of the present study are significant in many ways, it has its limitations also. Since this study was conducted on a sample of athletes representing the Universities of Uttar Pradesh, only it may be suggested that in future studies the sample may be broaden for greater reliability of the results.

Performance has been a topic of immense interest for researchers because innumerable factors especially psychological ones affect it. Thus, it may be suggested that replicative studies may be undertaken involving other correlates of performance on other individual and team games as well.

Realising that sports performance has to be a continuous process, it is suggested that sports performance should be more extensively and intensively persued at various levels.

Some new variables such as locus of control, sporting culture, work commitment of coaches and interpersonal interaction between athletes and coaches, should be introduced to determine their influence on performance.

Longitudinal studies should be undertaken in different disciplines of games and sports to enhance performance of the players in the country. Longitudinal studies would also throw light more precisely on the factors affecting performance.

Sex differences in performance of players of various age groups shouls also be determined.

It has been observed that in our country the researches lack in predicting psychological status of athletes that could help attain the optimum level of performance. Also the research projects applying objective physiological measures largely ignore the psychological impact of such data. Thus, it is suggested that a psychological model in a multidisciplinary approach must be employed to help the athletes in developing and sustaining competitive alertness and spirit.

Taking into consideration the suggestions given above, it may not be possible for individual researcher to undertake such studies. The Sports Authority of India should be most appropriate institution to concertedly undertake long term research projects to determine the psychological predictors of sports performance.

* * *

REFERENCES

REFERENCES

(References are given according to IAAP Publication Manual)

A.A.H.P.E.R. (1973) AAHPER Youth Fitness Test Manual. Washington, D.C. : AAHPER Publication.

Adame, D.D.; Johnson, T.C. & Cole, S.P. (1989) Physical fitness, body image and locus of control in college freshmen. Perceptual and Motor Skills, 68(2).

Adler, A. (1930) Practice and theory of individual psychology. Munich : Bergmann.

Alderman, R.B. (1974) Psychological behaviour in sports. Philadelphia : W.B. Saunders Co.

Alegaonkar, P.M. (1989) A study of self-concept, emotional, social, educational adjustment and Physical fitness. Singapore : proceedings of the world sports Psychology Conference, 45-46.

Allport, G.W. (1937) Personality : A psychological interpretation. New York : Holt, Rinehart & Winston.

Alsakar, F.D. (1992) Pubertal timing, over weight and psychological adjustment. Journal of Early Adolescence, 12, 396-419.

Anderson, J.L. (1979) A comparison of the effects of physical education classes in Boxing and Gymnastics on the self-concept of college freshmen. Dissertaion Abstracts International, 39.

Antonelli, F. & Mascellani, A. (1973) A psychological research on Bell's Adjustment Test. International Jounal of sports Psychology, 4(2), 61-62.

Arkoff, A.B.E. (1968) Adjustment and mental health. New York : McGraw Hill, Inc.

Armstrong, H.E. & Armstrong, D.C. (1968) Relationship of physical fitness to a dimension of body image. Perceptual and motor skills, 26, 1173-1174.

Atwater, E. (1995) Psychology of living : Adjustment, growth and behaviour today. New Delhi : Prentice Hall Pvt. Ltd.

Babu, K.D.S. (1981) Hockey comes to India : Rise-climax-downfall. Sports Annual, Hockey number. Lucknow : K.D. Singh Babu memorial society.

Bachmann, J. ; Green, S. & Wirtanen, I. (1972) Dropping out problem or symptom. Youth in transition series 3, 183.

Bala, R. (1994) Anxiety, self-concept and adjustment as related to performance of volleyball players. Unpublished Doctoral Thesis, Chandigarh : Panjab University.

Baldwin, J.M. (1895) Mental development in the child and the race : Methods and processes. 3rd ed. rev., London : Macmillan.

Balogun, J.A.; Okenofua, F.E. & Balogun, A.O. (1992) An appraisal of body image among Nigerian University students. Perceptual and Motor skills, 75 (3), 832-834.

Bandura, A. (1971) Social learning theory. Morriston, N.J. : General Learning Press.

Barrow, M. & McGee, R. (1979) A practical approach to measurement in physical education. Philadelphia : Lea & Febiger.

Bash, M.R. (1972) A study of the effect of varsity basketball participation on the self-concept of players of selected teams. Dissertation Abstracts International, 33, 148-183.

Bell, H.M. (1962) Bell Adjustment Inventory Mannual. Pao Atto : Consulting Psychologists Press.

Bennett, W.I. ; Goldfinger, S.E. & Johnson, G.T. (Eds.) (1987) Your good health : How to stay well and what to do when you are not Cambridge, : M.A. : Harvard University Press.

Bhatt, G.P. (1961) An experimental study of the achievements in basic education. Doctoral Thesis in education, Baroda : M.S.U.

Bhatti, A.S. (1987) Psychological and anthropometric differentials of athletes and non-athletes. Unpublished Doctoral Thesis, Kurushetra : Kurushetra University.

Bhushan, S. & Aggarwal, W. (1978) Personality characterstics of high and low achieving Indian sportpersons. International Journal of sports Psychology, 9(3).

Biddulph, L. (1954) Athletic achievement and personal and social adjustment of high school boys. Research Quarterly, 25, 1-7.

Billodeau, E.A. (1966) Acquisition of skill. New York : Academic Press.

Bilodeau, E.A. (1969) Principles of skill acquisition New York : Academic Press.

Bittner, L.L. (1977) A comparative analysis of physical fitness, self-concept and student teaching performance of selected students in a physical education professional preparation programme. Dissertation Abstracts International, 37.

Bordin (1943) A theory vocational as a dynamic phenomenon. Educational psychology measure.

Boscow, J. (1972) The physical and personality characteristics of champion male gymnasts. Coaching athletics and psychology. New York : McGraw Hill.

Boykin, L.L. (1957) The adjustment of 2078 Negro students. Journal of Negro Education, 26, 75-79.

Brar, J.S. (1973) The adjustment problems faced by the higher secondary school students. Journal of Education Research and Education, 9(4), 202-208.

Brodsky, C. (1954) A study of norms for body behaviour relationship. Washington : Catholic University Press.

Brooke, J.D. & Whiting, H.T.A. (1975) Human movement : A field of study. London : Henry Kimpton Publishers.

Brophy, J.E. (1967) child development and socialization. Chicago : Science Research Associates Inc.

Browfein, J.J. (1952) stability of self-conception as a dimension of personality. Journal of Abnormal and Social Psychology 47, 597-606.

Brunner, B.C. (1969) Personality and motivating factors influencing adult participation in various physical activities. Research Quarterly, 40, 464-469.

Buck, M.M. (1971) Job satisfaction and adjustment of coaches of chandigarh. Unpublished M.A. Dissertation, Chandigarh : Punjab University.

Bull, S.J. (1995) Reflections on a 5-years consultancy program with the England women cricket team. Social issue : European sport psychology. Sport Psychologist, 9(2) 148-163.

Bunnel, R.D. (1978) A comparison of high school and college basketball players and non-players on psychological sexuality and self-concept scales. Unpublished Education Dissertation. International Dissertation Abstracts, 39.

Campbell, P.B. (1966) Self-concept and academic achievement in middle school, Public School Children. Dissertation Abstracts International, 27, 1535-36.

Cash, T.F.; Winstead, B.A. & Janda, L.H. (1986) The great American shape-up. Psychology today. Sussex Publishers, Inc.

Chadha, N.K. & Chandra, S. (1985) A comparative study of the adolescent boys and girls in relation to their attitudes towards school adjustment and scholastic achievement. The Indian Journal of Community Guidence Service, 2(3).

Chaudhari, U.S. & Ray, S. (1992) A comparative study of self- concept, locus of control and adjustment of intellectually superior and normal students. Indian Journal of Behaviour, 16(3), 24-29.

Chauhan, S.S. (1978) Advanced educational psychology. New Delhi : Vikas Publishing House, Pvt. Ltd.

Claridge, G. (1967) Personality and arousal. London : Paragamon.

Clarke, D.H. : Wrenn, J.P. & Vaccaro, P.C. (1979) Muscular performance and body size characteristics of elite collegiate basketball players. American Corrective Therapy Journal, 33, 178- 183.

Coleman, J.C. (1960) Personality dynamics and effective behaviour. Chicago : Scott, Foreman & Comft.

Cone, S.L. (1979) The relationship between self-concept and selected physical characterstics among female varsity athletes and non-athletes. Dissertation Abstracts International, 40(8), 4471A.

Cooper, L. (1969) Athletics activity and personality. Research Quarterly. Sanfrancisco, W.H. Freeman.

Coopersmith, S. (1967) The antecedents of self-esteem. Sanfrancisco : W.H. Freeman.

Corey, G. (1984) Body image. Encyclopaedia of psychology. Corsini, R.J. (Ed.) New York : John Wiley & Sons.

Costill, D.L. ; Bowers, R. & Kumnar, W.F. (1973) Skinfold estemates of body fat among marathon runners. Medicine in science and sports, 2, 93-95.

Cratly, B.J. (1973) Movement behaviour and motor learning. Philadelphia : Lea & Febiger.

Cronbach, L.J. (1960) Essentials of psychological testing. New York : Harper & brothers.

Darden, E.N. (1972) A comparison of body image and self-concept variables among various sports group. Dissertation Abstracts International, 33, 603-604.

Davis, C. & Cowles, M. (1991) Body image and exercise : A study of relationships and comparisons between physically active men and women. Sex Roles, 25(1-2), 33-44.

Davis, C. (1992) Body image, dieting behaviour and personality factors : A study

of high performance female athletes. International Journal of sports Psychology, 23(3), 179-192.

Davis C. ; Brewer, H. & Weinstein, M. (1993) A study of appearance anxiety in young men. Social behaviour & personality, 2(1), 63-74.

Dellow, W.R. & Goldstain, M. (1984) Multiple analysis method and applications : New York : John Wiley & Sons.

DeMellow, M. (1980) The story of the Olympics. 3rd ed. India : National Burk Trust.

DeMoja, C.A. (1986) State trait anxiety and motor gross performance. Perceptual and motor skills, 62, 119.

DeMoja, C.A. & Dirosa, A.E. (1994) Psychological differences in amateur and competitive skiers. Perceptual and Motor Skills, Spl. Issue 79, 667-670.

Deutsch, M. (1960) Minority group and class status as related to social and personality factors in scholastic achievement. New York : Society for applied anthropology.

Dinucci, J.M. et al (1994) Analysis of body esteem of female college athletes. Perceptual and motor skills, 78(1), 315-319.

Donahue, E.M. et al (1993) The devided self : Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. Journal of personality and social psychology, 64(5), 834-846.

Dosamantes, I. (1992) Body image : Repository for cultural idealization denigrations of the self. Arts in psychotherapy, 19(4), 257-267.

Doudlah, A.M. (1962) The relationship between the self-concept, the body image and the movement concept of college women with low and average motor ability. Unpublished Masters Dissertation. Greensboro ; University of North - Caroline.

Ebbeck, V. (1994) Self-perception and motivational characterstics of tennis participants : The influence of age and skill. Journal of Applied Sports Psychology, 6(1), 71-86.

Edwards, A.L. (1968) Experimental design in psychological research, 3rd ed. New York : Holt, Rinehart & Winston.

El-Mofty, M.A. (1991) Psychological profile of obese adolescent girls : Ideal self-concept and body image perception. Derasat Nafsiyah, 1(3), 529-553.

Erikson, E. (1963) Childhood and society, London.

Fallon, A.E. (1990) Culture in the mirror : Sociocultural determinanats of body image in T.F. Cash and T. Pruzinsky (Eds.) Body development, deviance and change. New York : Gillford Press.

Fallon, A.E. & Rozen, P. (1985) Sex differences in perceptions of desirable body shape, Journal of Abnormal Psychology, 94, 102- 105.

Ferguson, G.A. (Ed.) (1981) statistical analysis in psychology and education. New York : McGraw Hill Co.

Festinger, L. & Katz, D. (1953) Research methods in behavioural Sciences. New York : Dryden.

Finkenberg, M.E. & Taper, L. (1991) Self-concept profiles of competitive bodybuilders. Perceptual and Motor Skills, 73(3), 1037-1043.

Fisher, S. (1958-a) Body image and a symmetry of body reactivity. Journal of Abnormal and Social Psychology, 57, 292-298.

Fisher, S. (1958-b) From back differentiation in body image and body reactivity. Journal of General Psychology, 64, 373-379.

Fisher, S. (1961) Body image and upper versus lower body sector reactivity. Psycho-somatic Medicine, 23, 400-402.

Fisher, S. (1965) Sex differences in body perception. Psychological Monograph, 78, 1-22.

Fisher, S. & Cleveland, S.E. (1958) Body image and personality. Newyork : Dover Publications.

Fisher, S. & Cleveland, S.E. (1958) Personality perception and body image boundry. In S. Wapner & H. Werner (Ed.). The body perception. New York : Random House.

Folk, L. ; Pedersen, J. & Cullari, S. (1993) Body satisfaction and self-concept of third and sixth grade students. Perceptual and Motor Skills, 76(2), 547-553.

Frankle, V.E. (1969) The doctor and the soul. New York : Bontom Books.

French, C.A. (1977) Comparison of level of aspiration of unfamiliar tasks and measures of self-concept of high and low motor ability groups of 6th, 8th and 10th grade girls in the regular physical education programme. Dissertation Abstracts International, 37(10), 6343.

Freud, S. (1933) New introductory lectures on psychoanalysis. New York : Norton.

Freud, S. "1888-1938" (1959) Collected papers, 5 Vols. Authorised translation. International psycho-analytic Library. New York : Basic Books.

Friedman, H.S. (1991) The self-healing personality : Why some people achieve health and others succumb to illness. New York : Holt, Rinehart & Winston.

Fromm, E. (1941) Escape and freedom. New York : Holt, Rinehart & Winston.

Frost, R.D. (1970) Psychological concepts applied to physical education and coaching. Massachusetts : Addison - Wesley.

Galloway, H.F. & Bean, M.F. (1974) The effects of action songs on the development of body image and body part identification in hearing impaired pre-school children. Journal of Music Therapy, 11, 125-134.

Garrett, H.E. (1969) statistics in psychology and education. Bombay : Vakils, Feffer & Simon Ltd.

Gellerts, E. ; Girgus, J. & Cohen, J. (1971) Children's awareness of their bodily appearance : a developmental study of factors associated with body percept. Genatic Psychology Monograph, 84, 109-174.

Ghorpade, M.B. (1978) The extent of maladjustment among the Bombay University Students. Bombay Psychologist, 1(1), 60-62.

Gill, J.S. & Rao, V.S.S.M. (1992) Self-concept and physical fitness in secondary school boys. Patiala : N.I.S. Scientific Journal, 15(1), 67-70.

Gill, R.S. (1981) Self-esteem as it relates to selected factors of physical fitness and voluntary participation in physical activity. Unpublished M.A. Dissertation, University of Florida.

Glanz, E.C. & Welston, E.B. (1958) An introduction to personal adjustment. Boston ; Allyn & Bacon, Inc.

Gordon, I.J. (1975) Human development ; A transactional perspective : New York : Harper & Row.

Gordon, J.E. (1963) Personality and behaviour. Newyork : McMillan.

Gorden, W.J. (1961) Synetics : The development of creative capacity. New York : Harper & Row.

Gould, D. & Udry, E. (1994) Psychological skills for enhancing performance : Arousal regulation strategies. Medicine & Science in Sports and Exercise, 26(4), 478-485.

Grewal, C.S. (1986) A study of physical fitness attitude towards physical activity and adjustment among university students across socio-economic levels. Unpublished Doctoral thesis, Chandigarh Punjab University.

Guilford, J.P. (1966) The nature of human intelligence. New York ; McGraw Hill.

Gupta, A. (1991) Gender stereotypes and self-concepts in college students. Psychological studies, 36(3) 180-186.

Gustavson, J.C. ; Gustavson, C.R. & Gabeldon, M.P. (1993) Body image

dissatisfaction among American male and female college students : A computer - based graphical approach. Perceptual and Motor Skills, 76(1), 147-151.

Guyot, G.W., Fairchild, L. & Hill, M. (1981) Physical fitness, sport participation, body build and self-concept of elementary school children. International Journal of sports Psychology, 12(2), 105-117.

Hagerman, F.C. ; Hagerman, G.R. & Nickelson, T.C. (1979) Physiological profiles of elite Rowers. The physician & Sports Medicine 7, 74-83.

Hall, C.S. & Lindzey, G. (1970) Theories of personality. (2nd ed.) New York : Wiley.

Hamachek, D.E. (1978) Encounters with the self. New York : Holt, Rinehart & Winston.

Harre, R. & Lamb, R. (Ed.) (1986) The dictionary of physiological and clinical psychyology. Oxford : Basil - Blackwell.

Hendricks, R. (1988) Wills book of excellence Hockey. Orient Longman Ltd. Faridabad ; Thomson Press (India) Ltd.

Holeman, M.G. & Parkhouse, B.L. (1981) Relationship between working environment, self-concept, real–ideal self discrepancy and functionality in physical education teachers. Research Quarterly for Exercise and sports, 53(3), 311-323.

Hollingsworth, B. (1965) Effects of performance goals and anxiety on learning a gross motor task. Research Quarterly, 36, 162-168.

Horney, K. (1937) The neurotic personality of our time. London : Routledge & Kegan Paul.

Huddy, D.C. ; Neima, D.C. & Johnson, R.L. (1993) Relationship between body image and percent body fat among college male varsity athletes and non-athletes. Perceptual & Motor Skills, 77 (3), 851-857.

Hussain, S. (1985) Adjustment and its measurement. New-Delhi : S. Chand & Co.

Hutchinson, M.L. (1977) Level of aspiration in elementary age children as a function of age, self-concept and body estimation. Dissertation Abstracts International, 327, 7614-A.

Igbokive, N.U. (1990) Effect of training on the self-concept of young adolescent girls. Indian Journal of Sports and Physical Education, 2(1), 1-6.

Imm, P.S. & Pruitt, J. (1991) Body shape satisfaction in female exercisers and non-exercisers. Women and Health, 17(4), 87-96.

Jackson, J.M. (1980) In completed research in HPERD. AAHPERO Publications.

Jackson, L.A. ; Ervin, K.S. & Hodge, C.N. (1992) Narcissim and body image. Journal of Research in Personality, 26(4) 357-370.

James, W. (1890) The principles of psychology, 2nd Vol. New York : Smith.

Jayakumar, P.P. & Rajamanickam, M. (1987) Adjustment problems of Sports School Boys of Tamil Nadu. In L.S. Sidhu & others (Ed.) Sports Sciences : Health, fitness and performance. Patiala : Four Star Printers.

John, P.J. ; Reid, J.B. & King, F.J. (1959) Adolescent's racial and ethnic differences in social attitudes and adjustment. Psychological Reports, 5, 549-552.

Johnson, W.R., Hutton, D.C. & Johnson, B.J. (1954) Personality traits of some champion athletes as measured by two projective tests. Research and H.T.P. Research Quarterly, 25, 484-485.

Jourard, S.M. & Secord, I.F. (1954) Body size and body catheris. Journal of consulting Psychology, 18, 184.

Kane, J.E. (1968) Personality in relation to physical abilities and physique. Unpublished Doctoral Thesis. London University.

Kane, J.E. (1972) Psychological apsects of physical education and sports. London : Routledge & Kegan Paul.

Kaplan, L. (1965) Foundation of human behaviour. New York : Harper & Row.

Kaur, N. (1992) Team Cohesion, adjustment and achievement motivation as related to performance and gender in team sports. Unpublished Doctoral Thesis. Chandigarh ; Punjab University.

Kephart, N.C. (1960) The slow learner in the classroom Ohio : Merrill.

Kerlinger, F.N. (1978) Foundations of behavioural research (2nd ed.) New York : Holt, Rinehart & Winston Inc.

Key, R.S. ; Felker, R.W. & Veroz, R.O. (1972) Sports interest and ability as contributors to self-concept in junior high school boys. Research Quarterly, 43, 208-215.

Khan, H.A. (1986) A personality probe into the neuropsychological domain of high level sport performers. In L.S. Sidhu and N.N. Mall (ed.) Modern perspectives in physical education and sports sciences. New-Delhi : Herman Publications.

Kirchner, G. (1978) Physical education for elementary school children; 4th ed., Dubuque, Iowa : Wine Brown Co.

Koening, F.B. (1969) Comparative analysis of selected personal and social background characeterstics of high school girls at three levels of participation in basketball. Dissertation Abstract Abstracts International, 30, 2732.

Kolb, C. (1959) Disturbances of body image. In S. Ariati (ed.) American handbook of Psychiatry. New York : Basic Books.

Kothari, C.R. (1987) Research methodology and techniques, (2nd ed.) New Delhi : Wiley Eastern Ltd.

Kroll, W.H. (1967) Sixteen personality factors profile of collegiate wrestlers. Research Quarterly, 38, 49-57.

Kroll, W.H. & Petterson, K. (1965) Personality factor profiles of college football teams. Research Quarterly, 36, 443-447.

Kulka, K.L. & Pragman, D. (1976) Comparative perception of psychological well-being as influenced by sports experience in female athletes. Research Quarterly, 47(3), 375-380.

Kumari, A. (1988) A comparative study of self-concept, adjustment and creative thinking of sports and non-sport school girls of Himachal Pradesh. Unpublished Doctoral Thesis, Chandigarh : Punjab University.

Landau, C. (1957) International group work and social adjustment. Dissertation Abstracts International, 17(9).

Lazarus, R.S. (1961) Adjustment and personality, New York : McGraw Hill, Inc.

Leahy R.F. (1966) A study of the relationship between certain objective measures of body image and a measure of motor performance on the stabilometer. Unpublished Masters thesis, University of Maryland.

Lerner, R.M. (1969-a) The development of stereotype expectenncies of body build behaviour relations. Child Development 40, 139-141.

Lerner, R.M. (1976) Concepts and theories of Child development Reading, Mass : Addison - Wesley.

Lindquist, E.F. (1956) Design and analysis of experiments in psychology and education. Boston : Houghton Miffin Co.

Lindzey, G. (1954) Handbook of social psychology. Cambridge : Addison - Wesley.

Lodhi, H. (1984) Jadid Olympic. Karachi : International Sports Publications.

Loye, A.C. (1968) A kinemetic analysis of three champions performing the volleyball spike. Dissertation Abstracts Interntional, 39(4), 2127A.

Madigan, M.E. (1962) Psychology : Principles and application. St. Louis.

Mahoney, M.J.; Avener, J. & Evener, M. (1983) Psychological aspects of competitive athletic performance. In Lars Eric Unestahl (Ed.) The Mental aspects of Gymnastics. Orebro : Veje Publications.

MAULANA AZAD LIBRARY
Acc No.
T-4926

Mann, N.S. (1988) Comparative study of psychological characterstics of athletes in team games and individual events. Unpublished Doctoral Thesis. Chandigarh : Punjab University.

Marsh, H.W. (1993) Physical fitness–self-concept : Relations of physical fitness to field and technical indicators for boys and girls aged 9-15. Journal of sports and Exercise Psychology, 15(2), 184-206.

Martin, R.A.; Kuiper, N.A.; Olinger, L.J. & Dance, K.A. (1993) Humour, Coping with stress, self-concept and psychological well being. Special issue : Current issues in psychological humour research. International Journal of Humour Research, 6, 89-104.

Maslow, A.H. (1968) Towards a psychology of being, 2nd ed., New York : Von Nostrand.

Maslow, A.H. (1971) Further researches of human nature. New York : Viking.

Masood, M.N. (1936) The World's Hockey Champions. Delhi : The Model Press.

Mathew, K.J. & Ranganathan (1987) Comparative study of players of different games. Vyayam Vidhyam Amravati : A Human Vyayam Prasarak Mandal Publication, 1-4.

Matveyev, L. (1977) Fundamentals of sports training. Moscow : Progress Publishers.

Maxiener, J. (1983) Extroversion and neuroticism of Volleyball players. International Journal of Sports Psychology, 14(1), 67- 71.

McCandless, B.R. (1960) Rate of development, body build and personality. Psychiatric Research Reports, 13, 42-57.

Mcdonald, K. & Thompson, J.K. (1992) Eating disturbance, body image dissatisfaction and reasons for exercising : Gender differences and correlated findings. International Journal of Eating Disorders, 11(3), 289-292.

McGuigan, F.J. (1968) Experimental psychology - A methodological approach, (2nd ed.) Englewood Cliffs N.J. : Prentice-Hall, Inc.

McNemar, Q. (1962) Psychological statistics. New York : John Wiley & Sons, Inc.

McWhirter, N.C. (1984) Guinness book of olympic records. New York : Bantom Books.

Mead, G.H. et al (1920) Studies in neurology (2nd Vol.) London : Republication of papers published in Britain between 1905-1918.

Megargee, E.L. (1966) Research in clinical assessment. New York : Harper & Row.

Melnick, M.J. & Mookerjee, S. (1991) Effects of advanced weight training on body cathexis and self-esteem. Perceptual and Motor Skills, 72(3), 1335-1345.

Mendenhall, W. & Ramey, M. (1973) Statistics for psychology. California : Wordsworth Publishing Co., Inc.

Miroy, N. (1986) The history of hockey. England : Lifeline Ltd., Laleham-on-Thames Staines, Midlx.

Mischel, W. (1968) Personality and assessment. New York : John Wiley & Sons.

Mohan, J. (1982) A developmental study of psychomotor reminiscence performance and vigilance. Report of Research Project. Sponsored by U.G.C. New Delhi, 36-70.

Mohan, J. & Virdi, P.K. (1985) Standardization of Personality Questionnaire on Punjab University Students. Indian Psychological Review, 28(6), 20-28.

Mohsin, S.M. (1984) Research methods in behavioural sciences. ISBN : Orient Longman Ltd.

Morgan, W.P. & Johnson, R.W. (1978) Psychological characterstics of successful and unsuccessful Oarsmen. International Journal of sports Psychology, 11, 38-49.

Morris, A.A. ; Vaccare, P & Clark, P.H. (1981) Pschological characterstics of

age-group competitive swimmers. International Journal of Sports Psychology, 12(1).

Myers, A. (1980) Experimental psychology. New York : D. Van Nostrand Co.

Nangia, S. & Sengar, B. (1989) A comarative study of the adjustment level of university sports persons. Fourth National Conference on sports psychology, 21-22.

Nelson, D.O. & Langer, P. (1963) Getting to really know your players. Athletic Journal, 44, 88-92.

Novaczyk, T.D. (1977) A comparison of trait and state anxiety levels between three divisions of youth Ice hockey participants and trait anxiety levels between athletes and non-athletes. Masters Thesis, Mankato State University.

O'Donoghue, R.K. (1990) A casual analysis of the inter- relationship among physical fitness, body-esteem, perception of fitness and self-concept for female participants on non-competitive sport. Dissertation Abstracts International, 8, 50.

Ogilivie, B.C. (1968) Psychological consistencies of competitors. Journal of American Medical Association, 205.

Olszewska, G. (1982) The relation of a self image, self- estimation and a tendency to dominate or submit to the effectiveness of the performance of team players. Internation Journal of Sports Psychology, 13, 107-113.

Palsane, M.N. (1970) Students adjustment at the university stage. Journal of Education and Psychology, 27 (4), 321–332.

Palsane, M.N. (1977) Adjustment Inventory. Poona : Anand Agencies.

Panda, B.N. & Biswas, N.B. (1989) Personality adjustment of high and low achieving football players : A comparative study. Indian Journal of Psychometry and Education, 20, 97-100.

Parr, R.B. et al. (1978) Professional basketball player's athletic profiles. The Physician and sports Medicine, 6, 77-89.

Pate, D.W. (1973) The relationship of selected physiological measurers to wrestling performance. Dissertation Abstracts International, 33, 3356-57A.

Pestonjee, D.M. (1981) Personality and physical abilities : An empirical Investigation. International Journal of Sports Psychology, 12(1).

Petruzellow, S.J. & Corbin, C.B. (1988) The effect of performance feedback on female's self confidence. Journal of sports and Exercise Psychology, 10(2) 178-183.

Pollock, M.L. et. al. (1977) Body composition of elite class distance runners. New York : Academy of Science, 301, 361-370.

Porat, Y. ; Lufi, D. & Tenenbaum, G. (1989) Psychological components contribute to select young female gymnasts. International Journal of Sport Psychology, 20(4), 279-286.

Poultons, E.C. (1974) Tracking skill and manual control. Newyork ; Academic Press 427.

Puretz, S. (1982) Modern dance's effect on the body image. International Journal of Sports Psychology, 13, 176-186.

Raimy, V.C. (1943) The self-concept as a factor in councelling and personality organisation. An unpublished Doctoral Dissertation. Ohio State University.

Raj. P.S. (1991) Psychological analysis of motor fitness, self- concept and adjustment. In J. Mohan, N.K. Chadha and S.S. Akhtar (ed.) Psycology of Sports : The Indian perspective. India : Friends Publications.

Rajamanickam, M. & Vasanthal, R. (1993) Adjustment problems of adolescent students in relation to their achievements. Journal of community Guidance and Research, 10(2), 153-183.

Rangari, A.D. (1984) Indian caste system and education. New Delhi : Deep & Deep Publications.

Rani, N.J. & Rao, P.K. (1992) Self-ideal disparity and yoga training. Journal of Indian Psychology, 10, 34-40.

Rani, U. (1974) A study of personality adjustment of athletes and non-athletes. Unpublished Master's Dissertation. Chandigarh ; Punjab Univesity.

Rao, N. (1972) A prognostic study of achievement in relation to academic adjustment. Indian Psychological Abstracts, 1(5).

Rastogi, M.R. (1979) Mannual of self-concept Inventory for college students. Agra : Psychological Research cell.

Reed, H.B. Jr. (1960) Anxiety : The ambivallent variable. Harvard Educational Review, 141-153.

Reid, R.M. & Hay, D. (1979) Some behavioural characteristics of Rugby and association footballers. International Journal of Sport Psychology, 10(4).

Resnick, J. (1951) A study of some relationships between high school grades and certain aspects of adjustment. Journal of Educational Research, 44, 321-340.

Richard, A.M. & Mechael, J.A. (1979) Academic, Psycho-Social and motor characterstics of participants and non-participants in children's sports. Research Quarterly, 50(2), 230-240.

Riley, J.H. (1983) The relationship between physical estimation, physical performance and self-concept for fifth grade boys and girls. Dissertation Abstracts Interntional, 44(2) 428A.

Robert, N. (1971) The relationship between sports participation, attitude towards sports, SES and self-concept of male problem youths. Dissertation Abstracts International 31, 3943A.

Robert, R.R. (1964) The effects of participation in selected intramural sports upon physical fitness, social and emotional adjustment of college fraternity men. Dissertation Abstracts International, 24, 275A.

Robert, W.W. (1956) The abnormal personality (2nd ed.) New York : The Ronald Press Co.

Roger, C.R. (1951) Client centered therapy : Its current practice, implications and therapy. Boston : Houghton-Mifflin.

Roger, C.R. (1959) A theory of personality and interpersonal relationship as developed in the client-centered frame work. In S. Katoch (Ed.) Psychology : A study of science, Vol. 3. Newyork ; McGraw Hill.

Roma, P. & Tiwari, g. (1984) State Trait Anxiety Inventory. Agra : National Psychological Corporation.

Rosen, G.A. & Ross, A.O. (1968) Relationship of body image to self-concept. Journal of consulting and clinical psychology, 32, 100.

Rosenberg, M. (1979) Conceiving the self. New York : Basic Book.

Rotter, J.B. (1954) Social learning and clinical psychology. Englewood cliffs, N.J. : Prentice Hall.

Roy, J. & Anuradha, T.S. (1995) Self-perception profile of gymnastic children. N.I.S. Scientific Journal, 3, 23-28.

Sahay, J. (1968) Hockey. Saharanpur : Sarvodaya Prakashan.

Sakers, A.E. (1968) The relationship between a selected measure of motor ability and the actual ideal self-concept, body image and movement concept of the adolescent girls. Master's Dissertation, University of Maryland.

Saraswat, R.K. (1984) Physical, social, temperamental educational, moral and intellectual aspects of self-concept. Indian Educational Review.

Saraswat, R.K. & Gaur, J.S. (1981) Approaches for the measurement of self-concept-An introduction. Indian Educational Review, 16(3), 114-119.

Saraswat, R.K. Mathur, P. & Gaur, J.S. (1984) - A study of adjustment of boys and girls belonging to the higher secondary school of Delhi. XXI Annual conference souvenir, Indian Academy of Applied Psychology, 44.

Sarbin, T.R. (1952) A preface to psychological analysis of the self. Psychological Review, 59.

Scarr, S. & Kidd, K. (1983) Developmental behaviour genetics. In M.M. Heith & J.J. Compos (ed.) Mussen handbook of child psychology. New York : Wiley.

Schendel, J. (1965) Psychological differences between athletes and non-participants in athletics at three educational levels. Research Quarterly, 36, 52-67.

Schendel, J. (1970) In J.S. Kenyon (ed.) Contemporary Psychology of sports. Chicago : Athletic Institute, 79-96.

Schilder, P. (1935) The image and appearance of the human body : Studies of the constructive energies in the psyche. New York : International University Press.

Schneider, A.A. (1965) Personality dynamics and mental health. New York ; Alfred, A. Knoft.

Scymon, E.W. (1956) Comparative study of certain behavioural characterstics of participants and non-participants in little large basketball. Research Quarterly, 27, 338-346.

Secord, P. & Jourard, S. (1953) Appraisal of body-Cathexis : Body cathexis and the self. Journal of consulting Psychology, 17, 342-347.

Selltiz, C. ; Marie, J. ; Deutch, M. & Cook, S. (1964) Research methods in social relations. New York : Holt, Rinehart & Winston.

Shaffer, L.F. & Shoben, E.J. (1956) The psychology of adjustment (2nd ed.) Boston : Houghton Miffin.

Sharma, D.V. (1984) Socio-psychological differentials of non- sportsmen and university representing sportsmen. Unpublished Doctroal Thesis. Chandigarh ; Punjab University.

Sharma, J.P. et al. (1974) Study of low achieving and high achieving schools. Rajasthan Board Journal of Education, 10(3), 42-51.

Sharma, K.R. (1993) Relationship of self-concept, adjustment, creative thinking and a tendency to dominate or submit to performance of team players. Unpublished Doctoral Thesis, Kurushetra : Kurushetra University.

Sharma, S. (1967) Relationship of self-concept with anxiety and school achievement of adolescents. An unpublished Doctoral Thesis, Chandigarh : Punjab University.

Sharma, S.S. Shukla, N.B. & Dwivedi, C.B. (1990) A study of intra-sports differences and self-concept of Indian cricket players. Indian Journal of Psychometry and Education, 21, 41-44.

Shaw, M. ; Edison, K. & Bell, H. (1960) The self-concept of bright under-achieving high school students as revealed by an objective check list. Personnel and Guidance Journal, 39, 193- 196.

Shoben, E.J.Jr. (1962) Behavioural aspects of the self. New York; Academy of Sciences, 96, 765-773.

Shontz, F.C. (1965) Research methods in personality. New York : Appleton - Century - Crofts.

Seigal, S. & Castellan, N.J. (1989) Non-parametric statistics for the behavioural sciences New York : McGraw Hill.

Singer, R.N. (1972) Coaching, athletics and psychology. New York : Harper and Row.

Singer, R.N. (1980) Motor learning as a function of age and sex in physical activity. Human Growth and Development.

Singer, R.N. & Kane, J.E. (1975) Research in sports psychology. International journal of sports Psychology, 10, 103.

Singh, D. (1991) Self-image, body image and movement image of Punjabi

University male athletes in relation to their participation. Unpublished Doctoral Thesis, Patiala. Punjabi University.

Singh, G. (1972) How to play hockey. New Delhi ; Continental Press.

Singh, G. & Debnath, K. (1986) A study of competitive performance and self-concept of Indian male gymnasts. SNIPES Journal, 9, 4.

Singh, H. (1984) Sports Training : General theory and methods. NS, NIS, Patiala : Phulkian Press.

Singh, H. (1991) Science of sports training. New Delhi. D.V.S. Publications.

Singh, R.; Mall, T. & Gujar, K.S. (1988) Assessment of personality traits of sub-junior basketball players of national level. Trends in sports sciences. Journal of sports sciences and Physical Education, 1, 239-245.

Sinha, A.K.P. & Singh, R.P. (1980) Manual for Adjustment Inventory for college students Agra ; National Psychological Corporation.

Sinha, A.K.P. & Singh R.P. (1984) Manual for Adjustment Inventory for School Students. Agra : National Psychological Corporation.

Sinning, W.E. et al. (1977) Body composition and somatotype of male and female Nordic Skiers. Research Quarterly, 48, 741-749.

Slater, E. & Cowie, V. (1971) Genetic of mental disorders. London : Oxford University Press.

Slepicka, P. (1975) The socio-psychological determinants of the individual in the group. International Journal of sports Psychology, 6(2).

Slevin, R.L. (1970) The influence of trait and state anxiety upon the performance of novel gross motor task under conditions of competition and audience. Doctoral Dissertation, Louisiana State University.

Sloan, W.W. (1963) A study of the relationship between certain objective of body image and performance on a selected test of motor abilities M.A. Dissertation, University of Maryland.

Smith, H.C. (1961) Personality adjustment. New York ; McGraw Hill, Inc.

Snyder, E.E. & Kivlin, J.E. (1975) Women athletes and aspects of psychological wellbeing and body image. Research Quarterly, 46, 191-199.

Souvenir (1994) Jawaharlal Nehru Hockey Tournament Society, New Delhi ; Caxton Press.

Spielberger, C.D. ; Gorsuch, R.L. & Lushane (1970) Manual for the State Trait Anxiety Inventory. Pals Alto California : Consulting Psychologists Press.

Spink, K.S. (1992) Relation of anxiety about social physique to locaiton of participation in physical activity. Perceptual and Motor Skills, 74(3), Special Issue, 1075-1080.

Stein, P.N. & Molta, R.W. (1992) Effects of aerobic and non- aerobic exercises on depression and self-concept. Perceptual and Motor Skills, 74(1), 79-89.

Stollak, G.E. ; Guerncy, B.J. (Jr.) & Rothberg, M. (1966) Psychotherapy research : Chicago : Rand McNally.

Sugerman, A.A. & Haronian, F. (1964) Body type and sophistication of body concept. Journal of Personality, 32, 380-394.

Sullivan, H.S. (1947) Conception of modern psychiatry. Washington : William Aderson White Psychiatry Foundation.

Sullivan, S. (1965) Relationsip between self and measured perception of physical and personality characterstics. Unpublished Masters Dissertation, Springfield : Springfield College.

Symonds, P.M. (1946) The dynamics of human adjustment. New York : Appleton-century-crofts, Inc.

Symonds, P.M. (1951) The ego and the self. New York : Appleton-century-crofts.

Tate, M.W. (1955) Statistics in education New York : Macmillan Co.

Theron, W.H., Nel, E.M. & Lubbe, A.J. (1991) Relationship between body image and self-consciousness. Perceptual and Motor Skills 73(3), 979-983.

Thiess, G. & Schnabel, G. (1987) Leistungs factoren in training and Wettkampf Berlin : Sportvelag.

Thomas, D.L. (1972) The body image of college males as influnced by success and failure in physical activity. Dissertation abstracts International, 32.

Thomas, R.M. (1985) Body image and body language. In R.J. Corsini (ed.) International Encyclopaedia of psychology. New York : John Wiley & Sons.

Tutko, T.A. & Richards, J.W. (1979) Psychology of coaching, Boston : Allyn & Bacon, Inc.

Tutko, T.A. & Tosi, U. (1976) Playing your best game all of the time. J.P. Tarcher, Inc.

Underwood, B.J. (1957) Psychological research. New York : Appleton - century - crofts.

Vallerand, R.J. (1983) On emotions in sport : Theoretical and socio-psychological perspectives. Illinois : Human Kinetic Publishers. Journal of Sports Psychology, 5(2).

VanYperen, N.W. (1995) Interpersonal stress, performance level and parental support. A longitudinal study among highly skilled young soccer players. Special Issue : European Sport Psychology. Sport Psychologists, 9(2), 225-241.

Verma, K.K. (1975) A comparison of personality traits of sportsmen participating in individual and team sports. Research Journal Arts and Humanities, Kurushetra University, 9, 169-174.

Vincent, W.J. & Dorsey, D.S. (1968) Body image phenomena and measures of physiological performance. Research Quarterly, 39, 1110-1106.

Walker, E. (1975) Learn to relax : Thirteen ways to reduce tension. Englewood Cliffs, N.J. : Prentice Hall.

Watson, J.B. & Dashiel, F. (1930) Behaviourism. Review Education. New York : W.W. Norton & Co., Inc.

Wein, H. (1973) The science of hockey. New Delhi : S. Chand & Co. Ltd.

Wein, H. (1981) The advanced science of hockey. London : Pelham Books.

White, A.J. (1974) The inter-relationship between measure of physical fitness and measure of self-concept of selected Missisippi State University male students. Dissertation Abstracts International, 34, 4849A.

White, R.W. (1956) The abnormal personality (2nd ed.). New York : The Ronald Press Co.

Whiting, H.T.A. (1973) The body concept. In whiting H.T.A. and Hardman, K. (Ed.), The human movement series - Personality and performance in physical education and sports. London : Henry - Kimpton Publishers.

Witkin, H.A. et al. (1962) Psychological differentiation. New York : John Wiley & Sons.

Witking, H.A. (1965) development of the body concept and psychological differentiation. In wener, H. and Wapner, S. (Ed.) The body percept. New York : Random House.

Wooden, J.R. (1980) Practical modern basketball. New York : John Wiley & Sons.

Wylie, P.C. (1984) Self-concept. In Corsini, R.J. (Ed.) Encyclopaedia of psychology. New York : John Wiley & Sons.

Yadav, S. (1992) Selected personality variables of adjustment and socio-economic status as related to performance in mass and class sports. Unpublished Doctoral Thesis, Chandigarh : Punjab University.

Zion, L.C. (1965) Body concept as it relates to self-concept. Research Quarterly, 36, 490-495.

* * *

APPENDICES

Appendix I

PROFORMA FOR

PERFORMANCE RATING BY EXPERTS

Components	Points	Score of the player
Skillfulness	1 2 3 4 5 6 7 8 9 10	
Tactical Ability	1 2 3 4 5 6 7 8 9 10	
Positional Play	1 2 3 4 5 6 7 8 9 10	
Team Spirit	1 2 3 4 5 6 7 8 9 10	
Decision Making	1 2 3 4 5 6 7 8 9 10	
Perseverance	1 2 3 4 5 6 7 8 9 10	
Exploiting Opponent's Weaknesses	1 2 3 4 5 6 7 8 9 10	
Anticipation	1 2 3 4 5 6 7 8 9 10	
General behaviours	1 2 3 4 5 6 7 8 9 10	
Understanding with Team-mates	1 2 3 4 5 6 7 8 9 10	

Total Points = 100 Score =

Instructions to Experts :

1. You are requested to evaluate each player with the help of 10-point rating scale on the performance components listed above.
2. Please encircle the number given against each components regarding the player's assessment of performance.
3. A rating of 1 will be assigned if the player has least capability for the component. A rating of 10 will be given if the player has highest capacity. In this manner evaluate each player on each component ranging from 1 - 10.

Self-Concept Scale

Constructed and Standardised By :
Dr. (Miss.) Mukta Rani Rastogi
Universiry of Lucknow, Lucknow.

Instructions :

Here are given fifty one statements. Below each statement are given five responses (Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree). Please read each statement carefully and respond to it by marking a tick (√) on any of the five responses given. 'If you really strongly agree with the statement, mark (√) on 'Strongly Agree' ; if you only agree with the statment, mark (√) on 'Agree' and so on.

Example :

(√)

Strongly Agree Agree Undecided Disagree Strongly Disagree

Here the individual 'X' agrees with the statement and therefore has marked (√) response 'Agree'.

There is no right or wrong response. Try to give your response according to what you feel about yourself in reference to that statement. Your answers will be kept confidential.

1. In General, I believe, I am a fairly worthwhile person.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
2. I like and feel pretty good towords myself.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
3. I worry over humiliating situations more then most persons.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
4. I can perform my best in a vocation or job against an opponent who is much supperior to me.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
5. I often feel that my movements are clumsy.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
6. I think I have an attractive personality.
   Strongly Agree Agree Undecided Disagree Strongly Disagree

7. If given a chance, I could do something that would be of much benefit to the world.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
8. I tend to be quick and certain in my actions.
   Strongly Agree Agree Undecided Disagree Strongly Disagree.
9. I think of myself as a successful person.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
10. At times I am uncharitable to those who love me.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
11. Sometime I feel depressed for no apparant reason at all.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
12. I frequently feel thwarted because I am unable to do as I desire.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
13. I often feel I get blammed or punished when I do'nt deserve it.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
14. I find it hard to continue work when I do not get enough encouragement.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
15. When upset emotionally I take much time to recover.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
16 I find it hard to do may best when people are watching,
   Strongly Agree Agree Undecided Disagree Strongly Disagree
17. At times I indulge in false excuses to get out of things.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
18. I prefer not to spend much time dwelling on the past.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
19. I am unwanted by those, I feel, are important to me.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
20. I am satisfied to a large extent about my sex matters.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
21. I become upset by critcism even if it is good or meant well.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
22. I look forward to prepare myself to attend what I intended to.
   Strongly Agree Agree Undecided Disagree Strongly Disagree
23. My greatest weakness is that I find difficult to complete my work without assistance from others.
   Strongly Agree Agree Undecided Disagree Strongly Disagree

24. It is my conviction that people in general tend to grow more conservative after the age of forty.
Strongly Agree Agree Undecided Disagree Strongly Disagree

25. I am as good as anyone else.
Strongly Agree Agree Undecided Disagree Strongly Disagree

26. If I were young again I would try to do the thing which I could not do earlier.
Strongly Agree Agree Undecided Disagree Strongly Disagree

27. The members of my family often take advice and suggestion from me for overall matters.
Strongly Agree Agree Undecided Disagree Strongly Disagree

28. When things go wrong I pity or blame myself.
Strongly Agree Agree Undecided Disagree Strongly Disagree

29. I sometimes think or imagine of performing sexual act that many people consider unnatural.
Strongly Agree Agree Undecided Disagree Strongly Disagree

30. I certainly feel useless at times.
Strongly Agree Agree Undecided Disagree Strongly Disagree

31. I spend much of the time worrying over the future.
Strongly Agree Agree Undecided Disagree Strongly Disagree

32. I find difficult to control my weight.
Strongly Agree Agree Undecided Disagree Strongly Disagree

33. I can always hear and see things as well as most other people.
Strongly Agree Agree Undecided Disagree Strongly Disagree

34. I do'nt get invited out by friends as often as I would really like.
Strongly Agree Agree Undecided Disagree Strongly Disagree

35. At times I brag about my qualities before others.
Strongly Agree Agree Undecided Disagree Strongly Disagree

36. I am fairly able to recall the significant events of my early childhood.
Strongly Agree Agree Undecided Disagree Strongly Disagree

37. I can recover easily and quickly from social blunders.
Strongly Agree Agree Undecided Disagree Strongly Disagree

38. I frequently fail to recollect several things which I am to do.
Strongly Agree Agree Undecided Disagree Strongly Disagree

39. I have several times given up doing a thing because I thought to little of my ability.

Strongly Agree Agree Undecided Disagree Strongly Disagree

40. I see it is a bad mistake to spend most of my time worrying for the future, instead I prefer to try to find some pleasure in every present moment.

Strongly Agree Agree Undecided Disagree Strongly Disagree

41. I am often in low spirit.

Strongly Agree Agree Undecided Disagree Strongly Disaggre

42. It is very important to me to feel that what I am doing is very worthwhile or meaningful.

Strongly Agree Agree Undecided Disagree Strongly Disagree

43. I enjoy mixing with people.

Strongly Agree Agree Undecided Disagree Strongly Disagree

44. I can tackle new situations with reasonable degree of assurance

Strongly Agree Agree Undecided Disagree Strongly Disagree

45. At times I feel a painful sense of loneliness and want very much to share an experience with someone else.

Strongly Agree Agree Undecided Disagree Strongly Disag e

46. I can almost always go to sleep at night without any difficulty.

Strongly Agree Agree Undecided Disagree Strongly Disagree

47. When luck turns against me I pray God to make it in favor of me.

Strongly Agree Agree Undecided Disagree Strongly Disagree

48. Sometimes I would become a respectable person of society.

Strongly Agree Agree Undecided Disagree Strongly Disagree

49. I believe that everyone is responsible for that he is as for what he does.

Strongly Agree Agree Undecided Disagree Strongly Disagree

50. I deserve severe punishment for my sins.

Strongly Agree Agree Undecided Disagree Strongly Disagree

51. I usually prefer to do things in tried way rather then experimenting new and different ways.

Strongly Agree Agree Undecided Disagree Strongly Disagree

Published By :

AGRA PSYCHOLOGICAL RESEARCH CELL
Tiwari Kothi, Belanganj, Agra-282004

Phone : 64965

Q-SORT STATEMENTS

BODY IMAGE

Name _____ Age _____

Level of Performance _____

Sr. No.		Very much like this	Much like this	Un-certain	Not like this	Not at all like this
1.	I am good looking.	( )	( )	( )	( )	( )
2.	I enjoy having my picture taken.	( )	( )	( )	( )	( )
3.	I feel uneasy when I sit facing a group.	( )	( )	( )	( )	( )
4.	People notice me when I enter a room.	( )	( )	( )	( )	( )
5.	I often notice people staring at me.	( )	( )	( )	( )	( )
6.	I enjoy looking at myself in the mirror.	( )	( )	( )	( )	( )
7.	Being well dressed is important to me.	( )	( )	( )	( )	( )
8.	I dislike fat people.	( )	( )	( )	( )	( )
9.	I inherited my body build and therefore cannot do much about the way I look.	( )	( )	( )	( )	( )
10.	I feel sorry for people who are homely.	( )	( )	( )	( )	( )
11.	My complexion has never been a problem.	( )	( )	( )	( )	( )
12.	Having a clear complexion is important to me.	( )	( )	( )	( )	( )
13.	Physical activity is important to me.	( )	( )	( )	( )	( )
14.	My shoulders are broad.	( )	( )	( )	( )	( )
15.	I have good posture.	( )	( )	( )	( )	( )
16.	I have full control on my body parts.	( )	( )	( )	( )	( )
17.	I am muscular.	( )	( )	( )	( )	( )
18.	I feel good in clothes I wear.	( )	( )	( )	( )	( )
19.	I often wished I look Like some one else.	( )	( )	( )	( )	( )
20.	My physical appearance bothers me.	( )	( )	( )	( )	( )

Sr. No.		Very much like this	Much like this	Un-certain	Not like this	Not at all like this
21.	I often think about how I appear to others.	( )	( )	( )	( )	( )
22.	I look like an average person.	( )	( )	( )	( )	( )
23.	I wish I could wear kind of clothes that other boys wear.	( )	( )	( )	( )	( )
24.	I like to wear tight fitting clothes.	( )	( )	( )	( )	( )
25.	I wish I could do something about my size.	( )	( )	( )	( )	( )
26.	It is important for me to know I am physically attractive.	( )	( )	( )	( )	( )
27.	Weight control is difficult for me.	( )	( )	( )	( )	( )
28.	I think a lot about my physical appearance.	( )	( )	( )	( )	( )
29.	I am under-weight.	( )	( )	( )	( )	( )
30.	I have strong arms.	( )	( )	( )	( )	( )
31.	I like to dress up because it gives me a good feeling.	( )	( )	( )	( )	( )
32.	My hands grip is strong.	( )	( )	( )	( )	( )
33.	I have thick ankles.	( )	( )	( )	( )	( )
34.	My smile is warm and friendly.	( )	( )	( )	( )	( )
35.	I am awkward.	( )	( )	( )	( )	( )
36.	I am proportionnd physically.	( )	( )	( )	( )	( )
37.	I spend great deal of time on personal appearance.	( )	( )	( )	( )	( )
38.	Comments made in a group about physical appearance usually bother me.	( )	( )	( )	( )	( )
39.	I like to be told how I look.	( )	( )	( )	( )	( )
40.	I really don't care how I look.	( )	( )	( )	( )	( )
41.	I rarely think about my body.	( )	( )	( )	( )	( )

Sr. No.		Very much like this	Much like this	Un-certain	Not like this	Not at all like this
42.	I feel fat.	( )	( )	( )	( )	( )
43.	I am too tall.	( )	( )	( )	( )	( )
44.	I have heavy thighs.	( )	( )	( )	( )	( )
45.	I like talking with opposite sex.	( )	( )	( )	( )	( )
46.	My physical size makes me prominent.	( )	( )	( )	( )	( )
47.	I like to learn about my body.	( )	( )	( )	( )	( )
48.	I am satisfied with the way I look.	( )	( )	( )	( )	( )
49.	I am physically attractive.	( )	( )	( )	( )	( )
50.	I have big bones.	( )	( )	( )	( )	( )

APPENDIX - IV

Reusable Booklet.

A I C S

(English Version)

Confidential

Prof. A. K. P. Sinha (Raipur)

Dr. R. P. Singh (Patna)

INSTRUCTIONS

- *Do not open or turn any page of this booklet until you are told to do so.*
- *Do not make any mark in this booklet and handle it with care.*
- *You have this booklet in which some questions relating to your personality are given and your answers are to be marked on the separate answer sheet provided.*
- *You will find two cells against each questions on the answer sheet, from your side left hand cell is indicating 'Yes' response while right hand cell is indicative of 'No' response. Out of these two cells, you have to draw a circle around any one which is applicable on you. Keep in mind that no item is false or true. What is true concerning You, draw a circle around that only. If the answer of a question is 'yes' about you, draw a circle around on left hand cell and if it is 'No' draw a circle on right hand cell.*
- *Your responses will be kept in complete secret, so answer them without any hesitation.*
- *There is no time limit, but try to finish it as early as possible.*

NATIONAL PSYCHOLOGICAL CORPORATION

4/230, Kacheri Ghat, Agra—282004. (U. P.)

Copyright C 1980 by National Psychological Corporation. All rights reserved, the reproduction of any part is a voilation of copyright Act.

1. (a) Have you ever strongly desired to go home ?
2. (b) Do you often daydream ?
3. (c) Do you feel that many of your friends have better educational background than you in many subjects ?
4. (b) It is difficult for you to sleep sometimes even when there is no noise disturbing you ?
5. (c) *Do you avoid meeting your friends in a public place ?*
6. (a) Do you feel that true love and affection is lacking in your home ?
7. (b) Do you feel quite tired by the end of the day ?
8. (d) Do you feel difficulty sometimes ?
9. (c) Are you often worried because of your poor memory ?
10. (a) Has your home become full of problems for you due to lack of money ?
11. (d) Do you get discouraged easily ?
12. (c) Are you of a shy nature ?
13. (d) Do you get excited in debates ?
14. (e) Are you more interested in the cinema actors than the learned people ?
15. (a) Have your parents interfered or objected to the company of some of your friends with whom you move around ?
16. (b) Have you ever had a major operation ?
17. (a) Does your father or mother get *irritated* soon ?
18. (c) Do you ask the speaker some questions in a meeting ?
19. (d) Do you believe that you are nervous ?
20. (a) Do you often quarrel with your brothers and sisters ?
21. (b) Do you often feel dizzy ?
22. (d) Does it displease you when something small is said against you ?
23. (e) Do you foreget easily what you have read ?
24. (b) Do your eyes get exerted when you see ?

25. (c) Have you ever organised any social function by yourself ?

26. (d) Are you unable to sleep because of some disturbed thoughts in your mind ?

27. (a) Do you feel that your parents are more strict with you than they should be ?

28. (b) Do you feel tired when you get up in the morning ?

29. (d) Do you worry over an insulting experience for a long time ?

30. (c) Do you worry over what your future job will be ?

31. (d) Are you afraid of telling your problems to your teacher ?

32. (c) Is it difficult for you to speak in public ?

33. (d) Do you cry easily over simple things ?

34. (a) Do you get contrary ideas of love and hate towards your family members ?

35. (b) Do you often have throat troubles ?

36. (b) Do you often complain about sickening feeling or vomiting feeling ?

37. (c) Do you think that your teachers take side of the other students ?

38. (a) Has any one of your respected family members made you unhapdΛ by passing comments on your appearance ?

39. (c) Do you experience loneliness even when you are among the people ?

40. (d) Do you feel gloomy when you get less marks in the examination ?

41. (c) Do you feel that your friends get better results in the examination because they have better facilities ?

42. (b) Were you sick for a long time in your childhood ?

43. (d) Do you hate the kind of happiness that makes others happy ?

44. (d) Are you afraid of appearing for examinations ?

45. (a) Are you happy and satisfied with the present atmosphere at home ?

46. (b) Do you sometimes get strong headache ?

47. (d) Do you fear that you might jump when you climb to a high place ?

48. (c) Is it difficult for you to grasp the subject-matter taught in the class ?

49. (a) Do you get very little help from home ?

50. (b) Are you often absent from college due to sickness ?

51. (c) Have you ever been unable to answer a question in class because of being afraid *to speak* ?

52. (d) Do you get angry easily ?

53. (e) Is it difficult for you to get your mind into studies ?

54. (a) Do you feel inferior that your friends' home atmosphere is happier than yours ?

55. (c) Do you cross the road to avoid meeting a certain individual ?

56. (d) Are you unhappy because of inferiority feeling ?

57. (e) Is it difficult for you to write notes in the class ?

58. (a) Do you understand that your parents are of old ideas ?

59. (b) Are you sometimes affected with skin disease ?

60. (d) Do you worry about expected problems to be come ?

61. (e) Do you know how to get ready for examination ?

62. (b) Are you always worried because of physical morbidity ?

63. (c) Do you make friends easily ?

64. (d) Do you feel perplexed taat people on the road are looking at you only ?

65. (e) Do you feel sleepy in class even after you have had enough of sleep during the night ?

66. (a) Do you feel that you are a burden to your parents ?

67. (b) Does your health always trouble you ?

68. (d) Do you get much disturbed because of criticism ?

69. (e) Do you think of leaving the college sometimes ?

70. (a) Are you satisfied with the behaviour of your brothers and sisters ?

71. (b) Does the idea of being infected with a contagious disease often terrify (frighten) you ?

72. (c) Do you get confounded (or baffled) very much when a teacher comes to your home suddenly ?

73. (c) Do you have any doubts on the value of things you read ?

74. (c) Do you have difficulty starting up a conversation with a stranger ?

75. (d) Do you get bewildered easily ?

76. (c) Do you like to take part in celebrating festivals or other entertainment programmes ?

77. (c) Do you hesitate in coming from your room into a room where there are some people sitting and talking among themselves ?

78. (d) Does your emotional (or sentimental) being rise or fall without any existing facts ?

79. (e) Is it difficult for you to express your ideas in writing ?

80. (c) Do you often experience loneliness ?

81. (d) Do you get frightened in the darkness when you are alone ?

82. (e) Do you think that you get encouragement from your teachers ?

83. (c) Are you careful in speaking something that hurts others ?

84. (d) Does praise please you more than the work knowledge ?

85. (c) Do you disregard others sentiments to achieve any important goal (or object) ?

86. (e) Do you think that your teachers have no interest in you ?

87. (d) Do people take advantage of you sometimes ?

88. (c) Does it worry you that your teachers think of you less than you really are.

89. (c) Do you come foreword and bring life into a dead party or function ?

90. (d) Does your mind sometimes wonder or get confused so much that you foreget the order of the work that you are doing ?

91. (c) Do you like to work in groups ?

92. (d) Do you get sometimes pleasing and sad thoughts one after the other without any reason ?

93. (e) Do you think that you have chosen subjects that are most appropriate for you ?

94. (e) Is it difficult for you to keep up with the progress in class ?

95. (d) Do you think that after you have finished studying you will not get the kind of job you like ?

96. (d) Do you sometimes feel that you should not have been born ?

97. (c) Do you have many friends in college in whom you trust ?

98. (d) Do you sometimes do some things unknowingly ?

99 (c) Do you quarrel with your classmates over little things ?

100. (a) Do you have to be often out to have peace at home ?

101. (d) Does n't it grieve you when a teacher praises any student ?

102. (d) Are you often lost so much in thinking that you do not know what is happening aronnd you ?

Adjustment Inventory for college students (English Version) by A. K. P. Sinha and R. P. Singh, 1980.

Composed by : VIMAL COMPOSING HOUSE, AGRA-4
Printed by : RASHTRIYA ART PRINTERS, AGRA-4

ANSWER SHEET : ADJUSTMENT INVENTORY FOR COLLEGE STUDENTS (A I C S)

A. K. P. SINHA & R. P. SINGH

(Name)— (Sex)—

(Age)— (Parent's occupation)—

(Education)— (Monthly income)—

Q. No.	Yes	No	Q. No.	Yes	No	Q. No.	Yes	No	Q. No.	Yes	No
1	☐	☐	26	☐	☐	51	☐	☐	77	☐	☐
2	☐	☐	27	☐	☐	52	☐	☐	78	☐	☐
3	☐	☐	28	☐	☐	53	☐	☐	79	☐	☐
4	☐	☐	29	☐	☐	54	☐	☐	80	☐	☐
5	☐	☐	30	☐	☐	55	☐	☐	81	☐	☐
6	☐	☐	31	☐	☐	56	☐	☐	82	☐	☐
7	☐	☐	32	☐	☐	57	☐	☐	83	☐	☐
8	☐	☐	33	☐	☐	58	☐	☐	84	☐	☐
9	☐	☐	34	☐	☐	59	☐	☐	85	☐	☐
10	☐	☐	35	☐	☐	60	☐	☐	86	☐	☐
11	☐	☐	36	☐	☐	61	☐	☐	87	☐	☐
12	☐	☐	37	☐	☐	62	☐	☐	88	☐	☐
13	☐	☐	38	☐	☐	63	☐	☐	89	☐	☐
14	☐	☐	39	☐	☐	64	☐	☐	90	☐	☐
15	☐	☐	40	☐	☐	65	☐	☐	91	☐	☐
16	☐	☐	41	☐	☐	66	☐	☐	92	☐	☐
17	☐	☐	42	☐	☐	67	☐	☐	93	☐	☐
18	☐	☐	43	☐	☐	68	☐	☐	94	☐	☐
19	☐	☐	44	☐	☐	69	☐	☐	95	☐	☐
20	☐	☐	45	☐	☐	70	☐	☐	96	☐	☐
21	☐	☐	46	☐	☐	71	☐	☐	97	☐	☐
22	☐	☐	47	☐	☐	72	☐	☐	98	☐	☐
23	☐	☐	48	☐	☐	73	☐	☐	99	☐	☐
24	☐	☐	49	☐	☐	74	☐	☐	100	☐	☐
25	☐	☐	50	☐	☐	75	☐	☐	101	☐	☐
						76	☐	☐	102	☐	☐

SCORING TABLE

Adjustment Area	a	b	c	d	e	Total	Interpretation

© 1980, 84 by National Psychological Corporation, 4/230 Kacheri Ghat, Agra - 282 004

PERSONAL DATA

Name (Block Letters). . . . . .

Class. . . . . .College. . . . . .

University. . . . . .Age. . . . . .

Participation in game (Hockey) :	One Year	( )
	Two Years	( )
	Three years and more	( )
Level of Participation :	Senior National	( )
	Junior National	( )
	Combined Universities	( )
	Inter-Zonal Intervarsity	( )
	Zonal-Intervarsity	( )
	U.P. Intervarsity	( )
	University	

Length of Training : . . . . . Years

Highest Achievement :	Tournament	Position
(Mention Winner/Runners-up)	. . . . .	

Parental Education :	High School	( )
	Intermedicate	( )
	Graduate	( )
	Post Graduate	( )

Father's Profession : . . . . . .

Father's Income (Per month) . . . . . .

Father's Sports Background : . . . . . .

Do parents encourage participation

in Hockey : Yes ( ) No. ( )

Order of birth : I ( ) II ( ) III ( ) IV ( ) V ( )

Number of dependents. . . . . .